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TABLE OF CONTENTS.

CHAPTER I.

	PAGE
INTRODUCTION - - - - -	1

CHAPTER II.

The Scurvy - - - - -	25
----------------------	----

CHAPTER III.

The Bowel Complaints - - - - -	31
--------------------------------	----

CHAPTER IV.

The Disorders of the Brain and Nervous System -	77
---	----

CHAPTER V.

The Fever - - - - -	116
---------------------	-----

CHAPTER VI.

Intercurrent Diseases - - - - -	141
---------------------------------	-----

CHAPTER VII.

Review of the Extent of the Disease at different Periods—Uncertainty respecting its Causes - - - - -	152
--	-----

CHAPTER VIII.

Removal of the Prisoners from the Penitentiary, and its Influence upon their Health - .	165
--	-----

CHAPTER IX.

Origin of the Disease - - - -	198
-------------------------------	-----

P R E F A C E.

I FEEL it to be a duty which I owe to the Medical Profession, to give them some account of the Disease lately prevalent at the General Penitentiary. I have abstained from doing so until the present time, in order that I might secure for it that attention which medical men never fail to bestow upon subjects essentially their own, when they are left entirely to themselves.

So long as such questions happen, from circumstances, to engage the interest of the public, or to admit the least mixture of party-spirit, medical men can hardly feel confident of their own impartiality; and they

would do well, perhaps, to suspend their inquiry, and, certainly, to withhold their decision, until that interest and that spirit have had time to subside.

While the Disease of the Penitentiary engrossed a large share of public attention; while the newspapers were discussing its nature and treatment; and a coroner's jury was giving judgment concerning its causes; while it furnished matter for debate in Parliament, and Committees of the House of Commons were examining evidence and reporting upon it, such a time would not have been well chosen for inviting formally the attention of medical men to the same subject; and had I then been prepared with this account, which I now submit to them, I should still have suppressed it, until the fairness and impartiality of their decision could be better ensured.

Dr. Roget and myself were employed in the service of the Penitentiary for fifteen months, from March, 1823, to May, 1824. During our attendance, we were accustomed to make memoranda of all circumstances which appeared important at the time, respecting the prevalent disease; and we both of us find in our possession some short note of almost every case which occurred.

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of furnishing the materials for the following history of the Disease.

During the first five months of our attendance, Dr. Roget and myself felt our office one of great labour, and of peculiar difficulty. The medical management of the Prison alone, from the number of the sick, from the nature of the Disease, and the character of the patients, was by no means an inconsiderable charge. But in addition to this, we had formal Reports to make, questions to answer, and explanations to give, verbally and in writing, to the Managing Committee of the Prison, and to Government; occasionally coroners' juries to attend, and to undergo frequent examinations before a Select Committee of the House of Commons.

These duties, however, which were simply laborious in themselves, were only rendered painful by the extreme vigilance and

circumspection which peculiar circumstances, unnecessary to mention in this place, obliged us to exercise in all our conduct. Nevertheless, our cordial co-operation, and our mutual friendship and confidence, enabled us to sustain the care and responsibility inseparable from our office; and I only now allude to them for the sake of shewing, that our daily labours were too pressing and anxious to allow us to expend much time in arranging the notes we had taken, or constantly to bear in mind the purpose of publication.

These notes, however, were faithfully taken at the time, and sufficiently copious; and the history which I have drawn from them, will be found (I trust) to represent the real character of the disease, clearly and intelligibly, to the minds of medical men.

As the labour and responsibility of our

charge were equally divided between Dr. Roget and myself, so the practical measures adopted were the result of our consultations. I am not aware that there ever arose between us the smallest disagreement either in opinion or practice; and I reckon it among the best fruits of my labours on this occasion, that they have procured for me in my colleague a faithful friend.

To Dr. Roget I am also indebted for suggestions, most useful to me in drawing up this account of the Disease, and I am allowed to appeal to him in confirmation of its truth.

Four months of the fifteen, during which we were employed at the General Penitentiary, that is, from the end of July until November, 1823, we had the able assistance of Drs. Hue, Macmichael, and Southey. Under what circumstances, in consequence

of our own earnest solicitation, that assistance was granted to us, will appear in the course of my Narrative.

It is my duty, however, in this place, to state, that to these Gentlemen, and to Dr. Macmichael especially, is to be attributed whatever success may be thought thenceforward to have attended our investigations into the origin of the Disease. Dr. Roget and myself had already notified to the Committee our belief, that there was some cause in operation over and above those to which we had originally attributed it; and that there was a suspicion of contagion, and a suspicion, moreover, of an injurious influence peculiar to the place, but nothing ascertained concerning either.

Now, Dr. Macmichael, in perusing the evidence given by Mr. Pratt, the apothecary, before a committee of the House of Com-

mons, found a statement, from which he took occasion to suggest to us a new train of inquiry. This inquiry ended in the production of certain documents, which established (we conceive) the prevalence of a disorder of the bowels, having the same general character with that which constituted a principal part of the late epidemic, within the Penitentiary, since its first foundation.

AN ACCOUNT
OF THE
DISEASE LATELY PREVALENT
AT THE
GENERAL PENITENTIARY.

CHAPTER I.

INTRODUCTION.

IN giving a medical history of the disease lately prevalent at the General Penitentiary, I shall best succeed in rendering it intelligible to the reader, if I describe all the circumstances connected with it in the same order in which they originally presented themselves to my own observation.

The disease did not immediately discover its complete character. It put on a great variety of forms, while all its symptoms did

not appear at one time and in each individual; and it is only, after continual observation of it during the space of more than twelve months, in which it has existed and ceased, and again and again recurred in many hundred individuals, that I can state, what I now venture to do, concerning its symptoms and its essential nature, its treatment and its probable causes.

There remain many circumstances respecting this disease, of which I profess myself still ignorant, and which the opportunity of watching those who have been the subjects of it for many years, could alone satisfactorily explain.

The character of the disease, as it first came under our observation, will be best collected from the Report, which Dr. Roget and myself delivered to the Committee on the 5th of April, 1823.

In consequence of the unusual degree of sickness which had recently been discovered in the Penitentiary, we were desired to visit

it, and to take the sick under our care, to inquire into the origin of the prevalent disease, and to turn our attention particularly to the dietary.

This Report contains the sum of our observation and inquiries during a month, and the conclusions which seemed fairly to result from them.

REPORT OF THE PHYSICIANS ON THE STATE OF
THE GENERAL PENITENTIARY AT MILBANK.

5th April, 1823.

TO THE COMMITTEE OF THE GENERAL PENITEN-
TIARY AT MILBANK.

GENTLEMEN,

IN conformity with the instructions conveyed to us in your resolution of the 28th February last, we have visited the Penitentiary daily, since the 1st of March; we have carefully and repeatedly examined, at different times, the state of health of each individual prisoner; we have taken constant charge of the sick in the infirmaries; we have communicated continually with your medical officers, Mr. Hutchinson and Mr. Pratt, and frequently with the other officers of the establishment; we have made whatever inquiries seemed requisite to obtain correct information concerning the nature and extent, and the origin and progress

of the disease lately prevalent in the Penitentiary, the causes which probably contributed to its production, and the means most expedient for its cure, and most likely to prevent its recurrence; and we have agreed upon the following Report:—

From the testimony of the officers of the establishment, and particularly of the matron, it appears, that during the last autumn the general health of the prisoners began visibly to decline. They became pale and languid, and thin and feeble. Those employed in tasks requiring much bodily exertion, were unequal to the same quantity of work as formerly. Those at the mill could grind less corn; those at the pump could raise less water. From time to time several of the laundry women fainted under their work; and the business of the laundry could only be carried on by continually changing the hands engaged in it. Such was the general state of the prisoners throughout the winter.

Still, notwithstanding this remarkable depression of the general health, there appeared among them no manifest signs of any peculiar disease. The number of sick received into the infirmaries did not much exceed the proportion which, in the winters of former years, it had borne to the total number of prisoners; and their disorders were those commonly incident to cold weather. It was not until the beginning of February, that any marks of scurvy were reported by Mr. Hutchinson, as having been noticed by him on a few individuals in the infirmaries. And here it may be observed, that these marks are, at their first appearance, peculiarly apt to escape discovery, unless the attention be

particularly directed towards them ; and that they often exist for a long time, entirely unnoticed by the patient himself. Between the fourteenth of February and the first of March, no less than forty-eight prisoners came into the infirmaries, affected chiefly with diarrhœa and dysentery. The diarrhœa and dysentery were of a peculiar kind, and were suspected to have a connexion with the scorbutic disease. At this time, also, all these various affections were found spreading extensively, but in different degrees of severity, throughout the prison.

On the 28th of February, our assistance was called for; and having learned the facts already detailed, we began our examination of the prison and the infirmaries on the 1st of March. We found the prevailing disease to be the same with that which is known by the name of *Sea Scurvy*, and which is characterized by livid spots, or blotches of the skin, especially on the lower extremities. Conjoined with the scurvy, in almost every case, there was diarrhœa or dysentery. There were indeed, a few instances of scurvy without disorder of the bowels; and moreover, numerous instances occurred of diarrhœa and dysentery, where no marks of scurvy had appeared. But still, whether the scurvy subsisted alone, or the diarrhœa or dysentery subsisted alone, or whether they were conjoined in the same individuals, there was found in all those who suffered from either, or from both, the same constitutional derangement, denoted by a sallow countenance, an impaired digestion, diminished muscular strength, a feeble circulation, various degrees of nervous affection, as tremors, cramps, or spasms, and various degrees of mental despondency.

These facts seemed to lead directly to the belief, that the

diarrhœa and dysentery, and scurvy, had their origin in the same morbid state of the constitution. In this belief we were more and more confirmed by further observation; and we soon had the means of determining with certainty, that they, in reality, constituted one and the same disease. We examined by dissection the bodies of two prisoners who died dysenteric, and found, in various parts of the intestines, the morbid appearances called, in medical language, *Ecchymoses*; that is, spots of the same kind as those which on the skin constitute scurvy. We found, in fact, an absolute scurvy of the bowels, of which the diarrhœa or dysentery was only a symptom and consequence.

With regard to the extent of this disease, we found more than one half of the whole number of prisoners affected by it, in one or other, or in all its forms; but the proportion was not the same among the prisoners of different sexes, or belonging to different classes. The women were affected much more extensively than the men; and of both men and women, the second class, which is composed of those who have been longest in confinement, was affected in a much larger proportion than the first class, which comprises those who have been more recently imprisoned. Of the women, about two-thirds were ill of the disease; of the men, rather less than one-half. Of the women in the first class, one-half were ill; of those in the second class, five-sevenths. Of the men in the first class, above one-third were ill; of those in the second class, rather more than one-half. The exact numbers are stated in the Table subjoined to this Report.

Some striking exemptions require to be noticed. Of

the 24 prisoners employed in the kitchens (13 men and 11 women) belonging to the class which had suffered most extensively, all were free from the disease, excepting three, one woman and two men. These three had been promoted to the kitchen within four days. It is proper to add, that the officers and servants of the Establishment, together with their families, residing within the walls of the prison, and amounting to 106 individuals, were universally exempt from the disease.

We took some pains to ascertain the period at which the disease in question might be considered as having commenced, and the gradations by which it had reached its present extent and aggravation. It appeared reasonable to assume, that whenever upon the feeble and drooping condition observed among the prisoners throughout the winter, diarrhœa or dysentery, or scurvy supervened, then the disease was fully constituted. With respect to the scurvy, it was scarcely possible to assign the exact time at which it commenced, on account of the insidious mode of its attack, and the facility with which it may elude observation on its first appearance. But we have fully satisfied ourselves, that there existed among the female prisoners, a few cases of decided scurvy, as early as the month of November. Among the men we cannot trace any instance of scurvy, back to a remoter period than two months. It is certain, however, that it was not until after Christmas that the scurvy had spread very extensively among either sex. About the middle of January, the instances had become numerous among the women; and among the men, about the middle of February; and it continued to increase progressively in both sexes, until the first week in March.

The diarrhœa and dysentery appear, in their origin and progress, to have kept pace with the scorbutic symptoms. Upon inquiry among the prisoners, we found that some of them had been occasionally suffering from diarrhœa before Christmas; but the instances being few, and the cases yielding readily to common remedies, they did not excite any alarm, and were naturally imputed to accidental causes. Under ordinary circumstances, such a conclusion might have been fairly admitted; but considering what the general health of the prisoners then was, and with our knowledge of what has since occurred, we cannot but suspect that, in some of these instances, the diarrhœa belonged to the same disease, of which it has since been found to constitute the principal and most formidable symptom.

In the course of January, the instances of diarrhœa were too numerous to be attributable to common or accidental causes. But, even then, it had not become matter of general complaint, for it was not attended with much pain, and in most of the sufferers it continued for a short period only, and then ceased; but it renewed its attacks from time to time on the same individual, gradually, though insensibly, impairing his strength. In this manner, through the month of January, many of the prisoners were sustaining a severe injury to their constitution, without being conscious of more than an accidental ailment, and without applying for relief.

Increasing daily in extent and severity, it at length became matter of complaint; and at the latter end of February, diarrhœa and dysentery constituted a large proportion of the cases in the infirmaries. Three deaths

from this disease, occurred between the 14th of February and the 1st of March, the day on which we made our first examination of the prison and the infirmaries. In the prison, the disease had reached the extent already mentioned; and in the infirmaries there were 64 patients labouring under the disease, in one or other of its forms.

In inquiring into the causes of the disease in question, we think it right to state our persuasion, that the situation of the prison has not contributed to its production. First, because, if this had been the case, it is reasonable to suppose that the same disease would have occurred in former years; whereas it has never appeared until the present winter. Secondly, had this been the case, the officers of the prison, being equally obnoxious with the prisoners to any injurious influence of situation, could not have been universally exempt, as it appears they have been, from the same disease. Thirdly, because, if the situation of the prison be injurious, it must be presumed to be so in consequence of marsh miasmata arising in its neighbourhood; yet, since its establishment, the prison has been altogether free from those diseases which marsh miasmata confessedly engender. Fourthly, because, marsh miasmata always arise during the hot, and never during the cold seasons of the year; and the diseases which they engender belong to the same seasons. Lastly, because, although scurvy and dysentery have undoubtedly been found prevalent in marshy districts, yet when marsh miasmata have produced them, they have been associated with intermittent fevers, and have occurred only at the hot seasons of the year. It may possibly be suspected that the simple dampness of the situation may have contributed something to the disease.

But we can state with confidence, that every part of the prison is singularly dry; and that in no cell or passage, on no floor or ceiling, or wall of the prison, have we found the smallest stain or appearance of moisture.

Several circumstances respecting the disease in question, which have been already mentioned, seemed to limit the causes of its production to such as could have had their operation exclusively upon the prisoners, and especially at the present season, and now for the first time. One such cause is found, we conceive, in the diet of the prison. During the last eight months the diet was different from what it had been ever since its establishment. The change which took place in July last, reduced the animal part of the diet almost to nothing. In a soup made of pease or barley, ox heads were boiled, in the proportion of one ox head to 100 male, and one to 120 female prisoners: and we found upon inquiry, that the meat of one ox head weighed, upon an average, eight pounds, which, being divided among a hundred, allows only an ounce and a quarter for each prisoner. This new diet had been continued until the present time; and to it we mainly ascribe the production of the disease in question.

It does, nevertheless, appear to us, that the diet of the prison has not itself alone been productive of the disease, but that it required the concurrence of other causes, of which the severity of the winter was probably the chief. The origin of the disease has been traced to the commencement of the cold weather, and its progress and increase have kept pace with it. There are, moreover, two circumstances which confirm us in the belief, that diet and

cold have been concurrent causes. The sufferers were most numerous in that class of prisoners which were most exposed to the influence of cold, from the lower temperature of the cells in which they pass the night: showing, that where both causes most conspicuously concurred, the disease was most extensively produced. Yet those individuals of that class, who, sleeping in the same cells and exposed to the same low temperature by night, were employed in the kitchen by day, and had access to richer diet, were universally exempt: showing, that where one cause was withdrawn, the other was of itself inadequate to produce the disease.

Such being the character and extent of the disease in the Penitentiary, and such its most probable causes, we proceeded to adopt those measures for counteracting it, which its own nature, and the opinion we entertained of its origin, seemed to suggest. We ordered an immediate change in the diet of the prison. In place of pease and barley soup for dinner, we substituted a daily allowance of four ounces of flesh meat, and eight ounces of rice daily for each prisoner, and white bread instead of brown: and, as the cheapest and the best antiscorbutic article of diet which could be procured at this season of the year, we ordered three oranges for every prisoner daily, one at each meal.

It is unnecessary to detail the methods of medical treatment employed in the infirmaries.

On our examinations of the prison between the 12th and the 19th of March, we found the general aspect of the

prisoners visibly improved. The taskmasters informed us, that they were more chearful, and did more work; and particularly that those employed at the mill could grind one-third more flour. The scorbutic marks had, in almost every case, begun to decline, and in many of the slighter cases had absolutely disappeared.

On our general surveys of the prison between the 31st of March and the 4th of April, we could not find more than fifty individuals of both sexes, on whom any marks of scurvy remained; and on the greater number of these, they were so slight as hardly to be detected.

The diarrhœa and dysentery have, upon the whole, kept pace in their decline with the gradual disappearance of the scorbutic spots. On each of our examinations of the prison, we found them relieved or cured nearly in the same proportion; and, on our last examination, there were not remaining so many as twenty cases of bowel complaints in the whole prison.

It is proper to remark that the diarrhœa and dysentery, being the most formidable part of the disease, was that for which medical treatment was especially required. Therefore, of the prisoners thus affected, we have constantly received as many into the infirmaries as there was room to accommodate, whether their cases were severe or slight. At the period when, as we have stated, the disease was upon the decline, that is, during the last weeks of March, it will be observed that there was a greater number of prisoners in the infirmaries than at the period when the disease in all its forms was at its greatest aggravation and

extent, that is, during the first week in March. The truth is, that when we began our attendance, we found only the severer cases of bowel complaints in the infirmaries; but as soon as we had learned, by the dissection of two patients who died dysenteric, that the disease tended to produce irreparable organic mischief of the intestines, we thought it right to bring as many cases as possible under strict medical treatment: and moreover, as soon as we had learned in the course of our observations, the great liability of the diarrhœa and dysentery to return, we thought it right to use the greatest possible vigilance over particular cases, during the period of their convalescence. Hence, many in whom we most strongly suspected this proneness to relapse, were still kept in the infirmaries, after the actual symptoms of their disease had disappeared; and a convalescent ward, in addition to the ordinary accommodation of the infirmaries, was opened for their benefit. These are the circumstances that are to be borne in mind, in order to reconcile the apparent inconsistency of the number in the infirmaries being greater, at the very time when the disease in the prison was daily and rapidly declining.

From the 1st of March to the present day, 222 patients have been admitted into the infirmaries, making, with the 110 already there, a total of 332 patients. Of these, eleven have died, six of dysentery, and the remaining five of diseases unconnected with the present disease. At present, the total number of patients in the infirmaries is 101, namely, 64 women and 37 men. Of this number we consider that 36 are convalescent, and exhibit no symptom of disease; and they are retained in the infirmaries only by

way of precaution against relapse: 19 only are still suffering the symptoms of the disease; and 46 are affected with other complaints.

It remains for us to fulfil the wishes of the Committee, by suggesting to them some considerations respecting diet. With regard to the diet of prisoners undergoing punishment for crimes, we presume the object to be, that they should have enough for nourishment and health, and nothing more. How much, and what quality of food will actually suffice for this purpose, can be deduced only from numerous and careful experiments. But no such experiments, as far as we know, have ever been made. There are certainly none upon record, to which we can refer for information. We beg, therefore, that the observations we venture to make, and the recommendations we offer, respecting diet, may be accepted as the result of the best consideration we can give to the subject, in the absence of positive experiments.

Practically, the main question seems to be, Can animal food be safely excluded from prisons, and particularly from the Penitentiary? We are aware that a large portion of the labouring agricultural population of this country subsists altogether upon vegetable food, and is generally reputed vigorous and healthy; and we admit the justice of the inference, that an exclusively vegetable diet is *generally* wholesome; and we allow, moreover, that to submit those confined in prisons to such a diet, is a justifiable experiment. But still it is merely an experiment; and considering that every circumstance of the present condition and previous habits of those imprisoned for

felonious crimes, is as different as possible from the simple condition and simple habits of an agricultural population, we should not be surprised to find that the experiment generally failed. At the Penitentiary there are, we conceive, peculiar obstacles to its success. These consist chiefly in the long periods of confinement, and the great number of prisoners.

To prisoners in a house of correction, whose period of confinement is limited to a few months, little hazard would result from an habitually scanty diet. People may be under-nourished for a short time, with impunity; but prisoners who are in the course of a confinement for five, or seven, or ten years (and none are condemned to less in the Penitentiary), cannot safely be subjected to the same system. Many injurious influences will arise in the course of years, which a few months would not produce. There will be changes and inclemencies of seasons to be provided against, and the heavy pressure of moral circumstances, for which, although they cannot be strictly appreciated, large allowances must be made. The great number of prisoners at the Penitentiary, independently of the contingencies to which they are exposed in the course of a long confinement, renders such an experiment peculiarly hazardous. Restriction to a vegetable diet, or to a diet that is considered just sufficient for nourishment and health, requires a constant vigilance over the health of each individual prisoner. Such a vigilance is the only security against the possible evils that may arise. In a prison containing 50 prisoners, a diet even of bread and water may be adopted without hazard; because there the requisite degree of vigilance can be obtained; and the medical

superintendent of such a prison would become so familiar with the aspect of individuals, as to see at once the earliest indications of disease in any one of them. But in a prison containing 900 or 1000 prisoners, the requisite degree of vigilance would be impossible; and for the want of it, a great hazard would be incurred by adopting the same system of diet.

For these reasons, and especially because the diet of the last eight months, in which the animal matter was reduced almost to nothing, has mainly contributed, as we conceive, to produce the present extensive disease, we recommend that, in future, animal food should make a larger part of the diet at the Penitentiary.

Upon the subject of Diet, we recommend:—

1st. That half a pound of flesh meat, without bone, be allowed to every prisoner, *once a week, on Sunday.*

2d. That, in addition, half a pound of flesh meat be allowed to every prisoner once a fortnight, on any day that the Committee may think proper.

3d. That white bread should always be given to the prisoners, that is, bread made of the best wheat flour, and free from all impurities.

4th. That the prisoners should have one meal each day entirely of solid food; that is, if they have gruel for breakfast, and gruel for supper, that their dinner should not be of soups or broth; but that, of whatever vegetable or animal substances it consist, they should be given in a solid form.

As to the kind of vegetables suitable for the principal

meal of the prisoners, a certain latitude must be allowed in regard to those which are most easily procured. All the vegetables in common use are wholesome. Potatoes and rice can be procured at all times; and fortunately they are the most nutritious.

We recommend, that the present allowance of four ounces of flesh meat, with one orange, daily, be continued to every prisoner for a month: that afterwards four ounces of flesh meat be given on alternate days for a fortnight, and that then, if the general state of the prison be healthy, it be put upon the ordinary diet, that shall be determined by the Committee.

In closing our Report, we beg to express our firm conviction that there is now no obstacle to the entire re-establishment to the healthy state of the Penitentiary. We must, nevertheless, add, that for several weeks to come, occasional cases of bowel complaint will probably still be found to arise in the prison; we suggest, therefore, the necessity of great vigilance and frequent inspection, that none of such cases may pass undiscovered; and we recommend, that every case, as soon as it is noticed, be removed to the infirmary, and subjected to the strictest medical treatment. Security against relapse will best be obtained by whatever is calculated to strengthen the constitutions of those who have already suffered, and especially by still employing the means which have hitherto mainly contributed to their recovery. It is with this view that we have recommended the continuance of the present allowance of animal food for another month.

We have examined the accounts which have been transmitted to us from the Secretary of State's office, of the diet used in different prisons in England, contained in the answers to questions which were sent to the visiting magistrates, on this and other subjects connected with the health of prisoners. But on comparing the different plans of diet detailed in those answers, which have as yet reached us, with the objects and system of the General Penitentiary, we do not conceive that any of them will be at all suitable to that establishment. We have to observe, however, that answers to the above-mentioned questions, have been received only from seven of the prisons that have been written to for information on these subjects.

(Signed)

P. M. LATHAM, M. D.

P. M. ROGET, M. D.

5th April, 1823.

NUMBERS AFFECTED WITH THE DISEASE.

TABLE of the Number of Prisoners of different denominations, who were labouring under one or other of the forms of the SCORBUTIC DISEASE, in the General Penitentiary, in the beginning of March, 1823.

		MARCH, 1823.	Total Number of Prisoners.	Number ill of the Disease.	Equivalent Number per cent.
MALES.	FIRST CLASS		309	110	35
	SECOND CLASS		222	121	54
	Confined . under 1 year . . .		173*	40	23
 between 1 & 2 years		156	74	47
 between 2 & 3 years		165	91	55
 between 3 & 4 years		28	19	68
 above 4 years . . .		9	7	78
	Total Males		531	231	44
FEMALES.	FIRST CLASS		94	52	55
	SECOND CLASS		233	165	71
	Confined . under 1 year . . .		37	12	32
 between 1 & 2 years		93	65	70
 between 2 & 3 years		106	74	70
 between 3 & 4 years		68	56	82
 above 4 years . . .		23	10	43
	Total Females		327	217	66
OF BOTH SEXES.	FIRST CLASS		403	162	40
	SECOND CLASS		455	286	63
	Total Prisoners		858	448	52

* Of these 85 had been received into the prison since the 1st of January, and therefore had been subject for a much shorter time to the influence of the presumed causes of the disease.

From this Report it is obvious, that we had no other opinion concerning the disorder, than that it consisted of a diarrhœa or dysentery, and a slight scurvy combined; that it had been produced by impoverished diet and a severe winter; that it was already nearly cured, and that, although occasional instances of relapse might be expected, the health of the prisoners would probably be re-established at no distant period.

With respect to the origin of the disease, all the facts, which had come to our knowledge, seemed to conduct so obviously to one conclusion, that we could not hesitate to adopt it; and the facts themselves, being entirely of a nature to be comprehended by persons not medical, we thought ourselves called upon to state them fully in the Report, in order that the Committee might possess the means of judging how far the conclusion, to which they had brought us, was correct.

There were certain other circumstances, which further confirmed us in our opinion respecting the origin of the disease and the

probability of its early disappearance. These, however, being more strictly medical, we did not think it necessary (considering to whom the Report was addressed) formally to specify. The rapid recovery of the sick, when the causes were removed from which their disease was suspected to spring, was a strong presumption, at least, that those causes were rightly ascertained.

In regard to such diseases, especially, as are engendered by defective nutrition, we knew it to be matter of experience, that they are generally capable of being speedily and effectually cured by an improved diet; and this had been strikingly the case in the present instance.

Further, the medical expedients hitherto employed had been very simple and very successful; and we could not impute a very formidable character to a disease which chalk mixture and tincture of opium could cure.

These were the remedies which we found the medical officers prescribing, when we were

first called to the Penitentiary ; and seeing that they answered so well the purpose for which they were intended, we abstained from instituting any new method of treatment.

Such were the views we had taken of this disease after a month's observation and inquiry ; and unfortunately it was necessary that all we knew or believed should be published. As soon as our investigations had enabled us to form (what we thought) a satisfactory opinion, we offered our Report to the Committee. By the Committee it was presented to the House of Commons, and immediately ordered to be printed.

This Report, as a medical document, was unquestionably premature, yet I candidly confess we had no such belief at the time.

The conviction it expresses, that there is " now no obstacle to the entire re-establishment of the healthy state of the Penitentiary " was proved, by what speedily occurred, not to have been well-founded ; and although our opinion respecting the sources from which

the disease was originally derived, was confirmed by numerous medical men who were examined upon the subject, and was at the time entirely satisfactory to ourselves, and equally so to the Committee, facts, subsequently brought to light, have led us to doubt whether this latter opinion was entirely correct.

The Report had hardly been made public when the disease, so far as it was referable to the bowels, began to re-appear: by the middle of the month of May it had again pervaded the prison; and by the middle of the month of June, all the prisoners, without exception, who had formerly suffered; and all, with very few exceptions, who had been exposed to its presumed causes, yet had never suffered before; and all, with very few exceptions, who had been admitted into the Penitentiary since its presumed causes had been removed, were involved in the same calamity; and the remedies, which were formerly successful in controlling it, had not now the smallest beneficial influence.

It should be remarked, that that part of the disease, which consisted in scorbutic spots and blotches, never returned. The few fading vestiges of scurvy, which were still discernible in some, entirely disappeared even while the patients were suffering a relapse of the bowel complaint.

CHAPTER II.

THE SCURVY.

IN the Report of the 5th of April, drawn up solely for the information of the Committee of the Penitentiary, all minute and formal descriptions of disease were purposely avoided. Scurvy, and dysentery, and diarrhœa have been hitherto mentioned only by name; but for the information of medical men it becomes necessary to shew what it was, that under the name of scurvy, was once co-extensive throughout the prison, with the complaints of the bowels. And we must here make room for the description of it, before we enter upon the consideration of the bowel complaints themselves, which returned after the final disappearance of the scurvy, and of other forms of disease which were superadded.

There is a peculiar condition of the skin, which is vulgarly called goose-skin. It is formed by numerous little elevated points, which give a roughness to the surface.

It occurs chiefly upon the extremities; and where it exists to a considerable degree, the surface is dry and unperspirable, and the cuticle falls off in minute scales, or in the form of a white powder. The act of stripping up the shirt sleeves, or pulling down the stockings, often shakes off a quantity of this white powder from the arms or legs. This state of the skin is produced by the common causes of constitutional weakness, and there can be no surer sign of the body being (if I may so say) out of condition. It is met with chiefly among the poor, who are ill-nourished and ill-clothed. Upon our first visit to the Penitentiary this peculiar condition of the skin at once attracted our notice, for it was found almost in every prisoner, and to a very remarkable degree.

In whatever part of the extremities this condition of the skin was most conspicuous, there were always found certain specks or spots of a blue or livid colour, formed by blood extravasated beneath the cuticle.

In some, these spots were no larger than a pin's head, and quite circular; when they

shewed themselves hardly any where, except just at the outside of the knee near the bend of the hams.

In some, intermixed with these spots of the smaller size, were others of the diameter of a pea, and quite circular; when they shewed themselves over various parts of the extremities, but still especially about the hams.

In some, there were blue and livid spots of a much larger size, still preserving a sort of circular figure, and evidently formed by two or three of the smaller spots, with which they were intermixed, coalescing into one. These specks and spots of all sizes, intermingled and coalescing with each other, were distributed over every part of the extremities.

In others, together with these specks and spots which have been described, or without them, there were large blotches of an irregular shape, and of such an extent as to leave the legs, or arms, or thighs, or buttocks, almost uniformly livid, with hardly an appearance of their natural complexion.

In a few there was ecchymosis of the conjunctiva; and in a few, ecchymosis and swelling of the upper eye-lid.

These appearances, occasioned by blood extravasated beneath the cuticle, from the clusters of little livid points about the hams to the large livid patches occupying the whole limb, must be regarded as indicating different degrees of the same disease, by whatever name it is called. Some concomitant conditions, which remain to be noticed, will enable us perhaps satisfactorily to determine what that name ought to be.

The gums were spongy, and soft, and livid, and disposed to bleed, in all those who had extensive discolourations of the skin; and in those who had mere specks and spots of ecchymosis, their condition, although it might not have been noticed under ordinary circumstances, was far from being healthy; they had a purplish hue, and were tender and sore, and often ragged, just where they come in application with the teeth. In a few, and especially in one man (Henry Peers) the mouth

seemed in a state of absolute rottenness, the gums bleeding and broken down, the teeth loose, and their fangs half exposed, and the whole mucous membrane of lips and cheeks black and ragged, while a foul cadaverous smell was emitted with the breath.

In many who exhibited specks and spots only of ecchymosis, and in all whose limbs were covered with large blotches, the muscles of the legs were perfectly hard and rigid. In a few, the legs were œdematous, and one man (Henry Peers, already mentioned) was universally dropsical.

These forms of disease, which have been described, were justly denominated scurvy. The scorbutic character was equally unequivocal in all the degrees, from the least to the greatest, in which the disease was seen at the Penitentiary, and fortunately, in the great majority of cases, it was seen in its mildest form.

It has been already stated in the Report, what means of treatment were employed, and

how far the scurvy had disappeared when those means had been in use a little more than a month. After the lapse of another month there might still remain several, in whom a very experienced eye could recognise certain little brown spots, as the last and almost worn out vestiges of scurvy; but not more than half a dozen individuals could have been shewn, whom a common observer would have regarded as authentic examples of what the disease had been. These were the few who still exhibited the remnants of large blotches upon their limbs.

CHAPTER III.

THE BOWEL COMPLAINTS.

I WILL now proceed to describe the Disease under the various forms in which, after the decline and disappearance of the scurvy, it presented itself to our observation; and the methods of treatment, which, from experience, have been found most serviceable. It is necessary, however, in the first place, to premise, that although the flux of the bowels has throughout been its leading and most prominent symptom, the symptom, moreover, which has been most constantly present, and that from which it has derived its character and its name, yet has it constituted one part only of the Disease. The Disease was neither a diarrhœa nor a dysentery simply, nor did it belong exclusively to the bowels; but it belonged to the whole system,

and was very extraordinary, and (as I believe) peculiar in its nature.

There was every degree and species of flux, that was ever seen or described. There were cases, which corresponded with the descriptions of the Indian cholera. The patients were seized with intolerable cramps at the pit of the stomach. They retched and vomited, and a thin turbid serum ran from their bowels, followed by severe tenesmus. The pulse became feeble and frequent; they were pale and chilly; and a sudden anguish pervaded the whole frame. Again, there were cases, which corresponded with the common autumnal cholera of this country. The patients had severe griping of the intestines generally, and cramps of the extremities, while pure and unmixed bile ran from the bowels, scalding them (as they expressed it) like melted lead in its passage.

Moreover, there was every kind and degree of dysentery; some purged pure blood in large quantities; others a fluid like the water in which raw flesh had been washed. In some, the evacuations, otherwise healthy,

were just streaked with blood; in some they contained (what seemed to be) lumps of flesh. In others they were mixed with mucus and slime, or they consisted of mucus and slime altogether.

Again, there were cases which differed very little from the diarrhœa of common casual occurrence, except that they were quite intractable by common remedies. The evacuations were loose and attended with griping, but feculent and without any morbid quality.

Lastly, there were cases which had no resemblance whatever, either to cholera, or dysentery, or diarrhœa, or to any disorder that has obtained a name. In the evacuations, there appeared nothing that had any sensible quality of fœces, of bile, or blood, or (of what is understood by) mucus and slime. But they consisted sometimes of a mass, like green or black grapes in a state of fermentation; sometimes of a matter like yeast; sometimes they were in colour and consistence like half-slaked lime, when it is

beginning to crumble; and sometimes like a thin mixture of chalk and water, and always intolerably sour and offensive, and in enormous quantity.

Now the probable issue of particular cases, and their degree of danger could not be estimated by the kind of flux simply. Experience taught us that those who had the extreme symptoms of cholera or dysentery were as likely to recover as those who had simple diarrhœa; and those who had simple diarrhœa were as likely to die as those who had the extreme symptoms of cholera or dysentery. Therefore it became the more necessary to seek for indications among concomitant symptoms, which might conduct us to a better judgment of the disease. Accordingly we looked to the general condition of the abdomen, and the presence or absence of pain^s within it; to the condition of the tongue; to the pulse, and to the presence or absence of fever. For hence it is always thought, in cases of intestinal flux, that the actual state of disease is capable of being most safely inferred.

When the abdomen was examined, it was found in some partially distended, and chiefly about the epigastric region; in some universally distended and tympanitic. In others it was found collapsed and retracted towards the spine. The tympanitic state of the bowels was much more remarkable in the women than the men. After every symptom of their disease had ceased, and they had gained flesh, and recovered the complexion of health, many of the women still continued, for months together, with the abdomen enormously prominent. In many, however, both women and men, during their disease and afterwards, the belly was soft and natural in every respect. In one instance, and in one only, was there any circumscribed tumour to be felt by pressure, within the abdomen, and there it arose from an enlarged liver.

Of pains referable to the bowels, there was great variety in the kind and degree which different patients experienced. Some experienced no pain at all, except just *before* each evacuation, when the common

urgency to stool seemed aggravated into real suffering. Some experienced none at all, except just *after* each evacuation, when it consisted of a scalding of the passage or tenesmus.

The great majority, however, had some kind of perpetual uneasiness within the abdomen. There was a very general complaint of (what was called) *sinking at the pit of the stomach*. What this sinking is those only know who have suffered it. All patients speak of it by the same name, but do not describe it further. From observing and interrogating those who now complained of it, I suspected it to consist of a certain degree of actual pain, combined with a feeling which is akin to approaching syncope, and spreads from the stomach, as from a centre, over the whole frame. It is a painful and overpowering sensation, as if animal life itself was hurt and lessened.

Now this sinking was not only present with the bowel complaint, but many suffered it alone, long before their bowel com-

plaint arose; and many still suffered it long after their bowel complaint was gone. In the one case, it gave notice that the disease was approaching, before its more characteristic symptoms arrived; in the other, it was an evidence that, although its more characteristic symptoms had subsided, the disease had not actually ceased. That this painful and depressing sensation, among many other severe sufferings, was often still the greatest of all, I infer from this consideration. Patients would continually endeavour to withdraw our attention from the more tangible symptoms of their disorder, for the sake of fixing it upon this. When we were interrogating them upon circumstances apparently more urgent, they would interrupt us, and exclaim, "but this sinking, this sinking; pray do something for this sinking!"

Many suffered severe pains, which came and subsided, and came again, and were often aggravated into paroxysms of extreme torture. They occupied indifferently various parts of the abdomen, and parts contiguous

to it; they were felt in the seat of the stomach, or of the bladder, or about the navel; they bordered upon the loins, or shot round to the back. In the same individuals, however, whatever part they once occupied, to that part they almost constantly returned after their remissions. These pains partook principally of the character of colic pains; while, in some respects, they were not strictly such. After having endured for a time, in great severity, they became tranquillized, but did not absolutely cease; and, although pressure, very carefully and equally applied over a large surface, would give relief when the paroxysm was present, it served to exasperate the pain which still remained after the paroxysm was gone. It seemed reasonable to infer that so much of the pain, as was constant, and abiding, and less severe, but capable of being exasperated by pressure, arose immediately from the diseased condition of the bowels, and that so much as was occasionally super-added and more severe, but capable of being relieved by pressure, arose from their temporary spasm.

Many suffered the less severe, and constant, and abiding pain, without any occasional aggravation of it into paroxysms of colic.

In the great majority of cases, whatever was the kind of flux, whether cholera, or dysentery, or diarrhœa, or any other of the disorders described, whether it was severe or mild, the tongue, during the whole course of the complaint, was quite clean and moist, and of its natural colour. All the physicians who visited the Penitentiary were struck with this anomaly. In a few cases, it might be a little more red than natural; in a few loaded with mucus; and in a few, even brown and dry; conditions which seemed determined by the presence of fever; but in no single case was there the red and glossy and smooth tongue peculiar to dysentery, and in no single case was there the slightest appearance of aphthæ.

With respect to the pulse, in a few cases it had frequency and strength enough to require bleeding, and in a few it had frequency

and strength enough to require some means of depletion short of bleeding. But in the great majority of cases it had no morbid character, which called for the employment of blood-letting or any other kind of depletion, and in many it had no morbid character whatever.

Of fever, as a part of the disease, I propose to speak more particularly hereafter, observing, in the mean time, that it was present in some cases, but that the majority were entirely exempt from it, and that, where it did occur, its symptoms only reached a very moderate degree of excitement.

Such was the remarkable diversity of symptoms which accompanied this strange and multiform disorder of the bowels.

From the species of flux (it has been already said) we could derive no criterion of the actual state of the disease, or its probable issue. Concomitant symptoms, which ordinarily afford an essential illustration of the nature of similar diseases, now rather

contributed to perplex us. From the tongue nothing could be learnt; from the state of the abdomen very little; and, although pain, and fever, and an excited pulse, necessarily implied a more active disease, they did not bespeak one more hazardous in the event. The danger was not to be estimated, either by the degree of pain, or the degree of fever, or by the blood that was purged, or by the violence of the retching and vomiting, or by the frequency of the pulse. If any form of the disorder was more formidable than another, it was that which seemed to consist in mere diarrhœa.

Two cases especially, which occurred soon after our first employment at the Penitentiary, made (as they were well calculated to do) a striking impression upon our minds. They had arrived, by a slow, and certain, and uninterrupted progress, at their fatal termination. The patients had no other symptoms of disease but a simple diarrhœa.

They had no pain, no fever; their pulse was sixty, and no more. Never did I wit-

ness the process of dissolution so lingering. In the very act of dying, when the pulse could only just be felt, it had not exceeded sixty. Their purging was incessant and incontrollable; but there was no morbid quality in their evacuations, except that they were watery. One of these patients (a female) was examined after death, and the only traces of disease discovered, were three or four small spots of ecchymosis at the upper portion of the large intestines, without any appearance of vascularity or inflammation in their neighbourhood.

In process of time cases of this kind became more and more numerous. They consisted of simple diarrhœa alone: such a diarrhœa as all physicians would have thought capable of being instantly arrested by the simplest remedies; yet this mere passive diarrhœa was the form of the disease which our own experience eventually taught us most to fear and deprecate.

Many poor wretches thus affected were given up by us as lost, and were just ready

to perish at the time when we first resorted to the use of mercury. They lay in bed without fever; without pain; without excitement of the pulse; but with a turbid water continually running from their bowels. This was their only symptom; and this nothing could restrain. Their complaint (as long as they did complain) was of "that dreadful sinking." But now their complaining had ceased. Being roused, they looked up for a moment, but made no lamentation, and then laid their heads down again in despair. It was a dismal office to watch over their tardy dissolution, and witness the frustration of every expedient for their relief. These were the cases in which we first put the efficacy of mercury to successful proof; and I cannot help mentioning the relief my mind experienced from a sense of responsibility which had now become truly awful, as soon as the salutary influence of this remedy was apparent.

In those who died, dissection discovered various morbid conditions in the course of the intestinal canal. They were such as

revery one, at all conversant with morbid dissections, is well acquainted with; for there was nothing essentially new in their kind. But at the same time many of the forms under which they presented themselves were new, or at least not familiar to my observation.

They were principally of three kinds, ecchymosis, congestion of the small blood vessels, and ulceration: the two first belonging exclusively to the mucous membrane; the last beginning in the mucous membrane, but subsequently extending to contiguous structures.

The *ecchymoses* were always of small extent, and few in number. I do not recollect an instance in which they occupied a space much larger than the diameter of a pea, or exceeded the number of five or six throughout the whole tract of the intestines. They were found indifferently in all parts of the stomach and bowels.

Some died of long-continued and incon-

trollable diarrhœa, in whom no other morbid appearance was found after death, but a few of these small spots of ecchymosis.

With respect to congestion of the small blood vessels, those who are accustomed to the examination of dead bodies well know, that nothing is more common than to find parts of the intestines changed from their natural colour, without any sensible alteration of their natural texture. These parts of the intestines assume every shade, from an indistinct blush to the most vivid scarlet and the deepest black. In its more intense degrees, the discoloration is seen as soon as you open the cavity of the abdomen, and appears at first to pervade the whole mass of the bowel in the situations which it occupies. Upon further examination, however, it is found to appertain especially to the mucous membrane, and that the essential condition out of which it arises, consists of an inordinate repletion of the minute blood vessels.

These discolorations of the mucous mem-

brane were frequently remarked in the intestines of those who died at the Penitentiary. They occupied indifferently all situations in the course of the intestinal canal, and often various situations remote from each other in the same individuals.

They were peculiar, in assuming the form of small patches, which were more distinctly circumscribed, and less shaded off into the surrounding parts than I had been accustomed to see them. There were perhaps, in the course of the intestines, half a dozen of these patches, each an inch or two in diameter, and no more, and of a deep and uniform red, while the membrane in its neighbourhood preserved its natural pale colour. Their deep and uniform red gave them the appearance of spots of extravasated blood. When, however, the portions of the intestine to which they belonged were held up to the light, it was manifest that the blood was still contained within the blood vessels.

Some died of long-continued and incon-

trollable diarrhœa, in whom no morbid appearance whatever was found, but a few of these small patches of vascular repletion. In some, these patches occurred together with spots of ecchymosis.

The ulcers, which were found in the bowels of several who died of this disease, did not occupy especially those situations in which ulcers are most commonly met with, namely, the termination of the small and the commencement of the large bowels, but all situations indifferently. They were generally few in number, and occurred at distant intervals throughout the whole tract of the intestines. Sometimes (most frequently) they did not exceed in diameter the size of a pea, and were of a circular shape. Sometimes they were large and irregular, occupying in diameter a space of one or two inches. They did not appear in the midst of an inflamed surface, but were circumscribed and distinct, while the mucous membrane in their neighbourhood was of a perfectly natural colour.

These ulcers had a certain correspondence with the ecchymosed spots and vascular patches already described. They were of the same size and shape, and, like them, they were found at intervals remote from each other, and without any marks of inflammatory action around them. These considerations led to the belief that, what was now an ulcer, had before been a spot of extravasated blood, or a patch of small blood vessels in a state of congestion, and that one had terminated in the other. The ecchymosed spot, the vascular patch, and the ulcer, were found all three together in the same bodies; and the two first were sometimes found alone, and sometimes together. But the ulcer was in no instance observed without one or both of the other two. Indeed, the vascular patch was sometimes met with in (what appeared to be) its state of transition into an ulcer. In the space which it occupied, the mucous membrane was rough and unequal to the touch, and, upon close examination, appeared visibly corroded.

The ulcers were discovered at various stages of their progress in different bodies, and in the same body. Sometimes they had reached as far as the muscular coat of the intestines, and sometimes as far as the peritoneum, which alone remained to preserve the continuity of the bowel in these situations. In a few instances the perforation was complete; for they had penetrated the peritoneum, and reached the cavity of the abdomen.

Generally there was a mere absorption of parts in the space which the ulcer occupied, constituting the simplest kind of ulceration. But occasionally there was something more than this. A foul yellow matter appeared in the centre of the ulcer. This matter was either the sphacelated structure of the bowel itself in the process of separation, or it was a morbid secretion proceeding from the ulcerated surface.

Those who are conversant with morbid dissections, will certainly not discover any thing new in these states of ulceration.

There was, however, one appearance, not unfrequently met with in our examinations, with which I was then unacquainted, and which (as far as I know) has never been particularly described. This was the appearance of ulcers in the course of their progress towards reparation. It is a question (I believe), whether ulcers of the bowels be capable of reparation at all. Here, however, there seemed to be sufficient evidence that they were so.

In several bodies, which we examined, one, or two, or three little spots were found, corresponding in shape and size with the smaller ulcers, which have been noticed, where there was no remaining character of ulceration, but the mucous membrane apparently drawn and puckered, and its continuous smoothness interrupted. At these spots, closer examination, by help of a lens, discovered a circular margin, which was slightly elevated, enclosing a space which was slightly depressed. This space had a reticulated appearance, formed by minute white filaments of lymph, crossing each

other in various directions, among which small red blood vessels were visible. There was no unusual vascularity of the mucous membrane in the neighbourhood, nor any alteration of its natural colour; so that these little spots would probably have escaped our notice, had we not been habitually minute in our examinations. In a few instances, however, we were led to them by observing a peculiar condition of the peritoneal coat, which seemed here and there gathered up and drawn to a point, appearing externally as if a small portion of the intestine had been taken up by the forceps and tied with a ligature on the inside. Wherever such was the condition of the peritoneum, upon examining the bowel within we found an ulcer in (what I presume to be) the course of reparation exactly opposite to it. It is probable that, where such was the appearance of the bowel externally, the ulcer had originally extended to a considerable depth; that it had reached perhaps beyond the muscular coat, and that its reparation was in some sort necessarily effected at the expense of the peritoneum. Granulations springing from the

bottom of the ulcer, as they contracted and coalësced, would pucker and draw together that part of the peritoneum from which they grew.

Now it can hardly be doubted, that the conditions which have just been described really arose from ulcers in the course of reparation. They were found in the same bodies with ulcers in a progressive state, and with spots of ecchymosis, and patches of vascular repletion.

Upon a review of these several morbid appearances within the intestines, it struck me, that not the spots of ecchymosis only, but every morbid appearance which presented itself, had the character of certain partial and chronic eruptions upon the skin, when the whole surface is tolerably healthy, except the space which the eruption occupies.

Such eruptions upon the skin no remedy can immediately cure. They are curable only through the medium of the constitu-

tion, out of whose morbid state they arise, and after a long time, and with a choice of all the most favourable circumstances. It will hereafter appear that, in this respect also, a parallel subsists between them and the morbid conditions of the intestines, which we have been discussing.

In comparing the symptoms during life with the actual state of disease found upon dissection, there did not appear any very strict correspondence between them. The flux, according as it partook of the nature of cholera, or dysentery, or diarrhœa, or was of any other kind which has been described, could not be made out to arise from ecchymosis in one case, from congested blood vessels in a second, or in a third from ulceration.

There was, however, a certain correspondence between them of a more general character.

Among the symptoms there was seldom found any vigorous excitement of the constitution at large, any strong pulsation of

the arteries, or high inflammatory fever; and, in the actual state of disease, there was seldom any thing calculated to produce them.

Among the symptoms, there were those well-marked varieties which are conceived to denote that the disease, whatever its kind be, occupies especially certain portions of the intestinal canal. There was pain combined with great sinking and depression, which bespeaks the disease to be not far from the stomach. Pain combined with less and less of sinking and depression, which bespeaks it to be more and more distant from the stomach; and pain, which rather rouses and excites, and is augmented in severity until the bowels are relieved, shewing the disease to be probably in the large bowels. Hence, before any bodies had yet been examined after death, it was anticipated, that disease would be found in various parts of the intestines, although its precise nature could not be foretold; and, as soon as dissections were made, such (we have seen) was found to be the fact.

Still, upon the whole, the disease, as traced out by dissection, was far from affording an entire explanation of the disease, as manifested by symptoms during life. In a few instances, indeed, there was enough to account for protracted illness of the kind we witnessed, and for death; as when ulcers were found which had destroyed, in various degrees, the texture of the intestines, or some one ulcer which had entirely penetrated them. But, in many instances, certainly in the majority, there was an apparent inadequacy of the cause to the production of such results; and we were surprised to find a few minute spots where blood was extravasated beneath the mucous membrane, or a few circumscribed patches where blood was detained in the minute blood vessels, the only visible traces of disease in those who died, after long-continued and uncontrollable diarrhœa or dysentery.

But the entire disease does not always consist in its visible marks upon particular organs. If injury be done to a healthy body, there, indeed, it may; and its ana-

tomical character simply may become the best criterion, whether it be of easy or difficult reparation. But, where a visible change of structure arises, independent of injury from without, there must be something within the body that preceded, and conducted to it. This something, this inceptive movement, whether it be of the part or of the constitution, which foreruns the actual manifestation of visible disease, will not bear to be spoken of with precision. We talk of cachexies, of constitutional taints, and morbid dispositions, not knowing how to define what we mean. This, however, we know, that the local diseases which follow the conditions we thus designate, upon whatever part of the body they fall, are much more difficult of cure than their mere anatomical character would imply.

Blood, extravasated in any moderate quantity from local injury, is easily absorbed; and small blood vessels, which have become overloaded from the same cause, easily empty themselves. But blood extravasated, and vessels overloaded, when the cause is

in the constitution, may long remain so, and reparation be tardy and difficult; while, in the mean time, there may arise various symptoms of disease, and various hazards of life, according to the organs which are engaged.

Now it is certain that, at the Penitentiary, long before the manifest signs of any particular disease had yet appeared, the general health of the prisoners had begun to decline. It was not until February, 1823, that scurvy, and diarrhœa, and dysentery, were found spreading extensively throughout the prison; but it was in the autumn of 1822 (as we collected from the officers of the establishment), that the prisoners "became pale, and languid, and thin, and feeble." This universal cachexy (for so it may be called) endured for many months; yet no man can tell what it was in its essential nature. But, indefinite as it was, it nevertheless was something real; and, in viewing the disease of the Penitentiary as a whole, this surely claims to be considered as a part of it, and perhaps its most important

part; for, subsisting at first alone, before the more definite forms and symptoms appeared, it was probably this from which they derived their origin; and afterwards still subsisting, in many instances, it was probably this that mainly contributed to retard their cure.

These symptoms, as they declared themselves through the medium of the bowels, and the actual state of disease found within the bowels, upon dissection, I have already described. I shall now proceed to shew how their cure was attempted.

At the beginning of the month of April, the flux, which had affected between four and five hundred individuals, had almost disappeared, no other remedy having been used but the chalk mixture and tincture of opium; and, under the influence of an improved diet, the general health of the prisoners had visibly improved.

But, when the flux of the bowels returned, at the end of the month of April, it was no

longer amenable to the same remedies. Not even in those cases, which bore the character of simple diarrhœa, did chalk mixture and tincture of opium procure the smallest relief. No effectual good was derived from practice directed to the simple purpose of restraining the flux, even where this was the only indication to follow.

Still we endeavoured to reach the disease, by addressing our remedies to the more conspicuous symptoms. Where there was pain, aggravated by pressure, and attended with fever, bleeding, or blistering, or fomentations were used, according to the urgency of particular cases. But little abatement, even of the pain, ensued, and none whatever of other symptoms, or of the flux. Where there was simple colic pain, all the methods of soothing were employed, by opium, fomentations, &c. &c. But the consequence was only a brief respite from suffering, while the flux continued.

When common remedies, directed to the

fulfilment of plain and intelligible purposes, did not succeed, we were, in a manner, compelled to pursue other less certain indications, and to employ other expedients of less acknowledged efficacy; such as astringent bitters, aromatics, mucilaginous drinks, antimonials, and ipecacuan. Ipecacuan was given in small doses of a grain or two grains, three or four times a day; or it was given once or twice only in large doses, of fifteen or twenty grains, combined with a couple of grains of opium. Moreover, the root was infused in water, and thus it was employed as a lavement. But, in all modes of its administration, and in every quantity, the result was equally unfavourable to the efficacy of the remedy.

Glysters, composed of starch and opium, and of liq. plumbi acetatis dilut. and opium, were administered, with temporary benefit, in a few instances, but they did no permanent good.

Warm baths were used; the belly was

swathed in flannel rollers; and stimulant liniments were rubbed upon the abdomen; but they did no apparent good.

It is proper to mention, that the most efficacious remedy (efficacious, I mean, as a palliative, and no more) was an opiate plaster, or rather cataplasm, of which these were the ingredients:

Empl. picis comp. ℥ijss.

Empl. plumbi ℥ss.

Opii duri contriti

Olei menthæ

Camphoræ āā ℥ij.

M.

These ingredients constituted a kind of poultice, which was spread upon folds of linen, and laid upon the abdomen. The effect was to procure sleep, or to maintain a state of drowsiness, or to excite and keep up delirium during forty or fifty hours. The delirium was manifested by continual talking and laughter.

As long as the nervous system was kept under this influence, the bowels seemed free

from pain, and the frequency of the evacuations was greatly diminished; but, as soon as it threw off its torpor, or lost its unnatural excitement, the pain returned, and the evacuations became as numerous as before. Thus it was evident, that no progress whatever had been made towards the essential cure of the disease.

Still there was a remedy upon which all our reliance was eventually placed, and that remedy was mercury.

Owing to considerations which had an unavoidable influence upon our minds, some time elapsed before we resorted to its employment.

Upon the first appearance of the flux, mercury (as we understood) had been fairly tried, in a few cases, and had failed. Upon its first appearance, too, the flux had been combined with scurvy, in a large proportion of all the cases which occurred, and spots of ecchymosis had been found in the bowels of several who died; and, although there were

now no longer any scorbutic marks upon the skin, the disorder of the bowels, upon its return, could not be certainly pronounced to have changed its original nature.

We abstained, therefore, from the use of mercury, because we suspected at least that we had still to deal with the same disease in which it had been already found prejudicial, and that it might possibly still partake of the nature of scurvy.

But, after the failure of every other medicine in the treatment of this disease, were we justified in abstaining even from the cautious use of a remedy, which its present circumstances especially called for, merely from the recollection of certain symptoms which had been its concomitants a month ago?

With regard to mercury, as a remedy in scurvy, writers of authority had denounced it as injurious, and we could not help placing a certain reliance on what seemed to be the result of their observation. But still

their theory about putridity and the crisis of the blood had evidently determined their notion of the essential nature of scurvy; and their theory about septic and anti-septic remedies, had evidently led them to assign to mercury a place among the former. Hence there was room to suspect, that these speculations might possibly have had a share in producing their unqualified condemnation of mercury in scorbutic complaints. So that, even if the scurvy had still been present, in the very slight degree (the slightest possible) in which it formerly existed, I cannot think, when every other remedy failed, that it ought to have been an absolute prohibition of the trial of mercury, after the cautious manner in which we proceeded to employ it. But, in fact, the scurvy had almost entirely disappeared.

While two hundred individuals were suffering a flux of the bowels at the same time, and many seemed gradually approaching to their dissolution; and while the numbers of the sick were every day increasing, and the forms of the disease were becoming more

and more various and complex, and all the methods of treatment hitherto employed had served to palliate only, and not to cure, Dr. Roget and myself determined, after mature deliberation, to get rid of all restriction upon our practice, which had arisen from the consideration that the flux was originally combined with scurvy; and we agreed to employ mercury, in such forms and combinations as the exigencies of particular cases might seem to require.

We first made trial of this remedy in those cases which our experience had brought us to regard with the greatest apprehension, cases (if I may so say) of mere passive diarrhœa, where there was no excitement of the circulation, where there was little pain, and little of morbid quality in the evacuations, but where the evacuations were enormously frequent, and hitherto absolutely uncontrollable. In these cases all medical expedients had failed, and we were now compelled to content ourselves with such temporary relief, and such short intervals of ease, as opium, administered in draughts, or clysters, or in

cataplasms, was able to procure. In our trial of mercury for these cases, we proceeded thus:—Equal quantities of hydrager. c. cretâ and pulv. ipec. comp. were made into pills; each pill consisted of five grains, two grains and a half of each ingredient, and one of them was administered three times a day, to about twenty patients. Still there was no abatement of the diarrhœa. They were administered four times a day, and still the diarrhœa continued. They were given five times a day; when, upon our next visit to the Penitentiary, we found, among those who had taken mercury, one female in a profuse salivation, and the diarrhœa completely arrested in her, and in her alone. This poor creature had formerly had scorbutic spots upon the skin, at the same time that she suffered a flux of the bowels. The scorbutic spots had disappeared altogether; the flux had subsided, but returned; and that form of it, which has been described, had now brought her life into imminent hazard.

In this instance, the salutary effect of

mercury was unquestionable; and the condition of its success seemed to be, that it had procured salivation. We proceeded, therefore, more boldly in the use of it, still giving it in the same form, and in combination with Dover's powder. We increased the dose to those who already took it; and, as they became salivated in succession, they were all freed from the symptoms of their disorder. We subjected more and more of the prisoners to the same treatment, watching them carefully in the mean time, for the sake of still more confidently ascertaining the precise condition, which was essential to the success of the remedy. This we uniformly found to be the production of salivation.

Be it remembered, that these cases, upon which the salutary effect of mercury was first proved, were those which occasioned us the greatest apprehension. Several of the patients were so feeble and emaciated, so pale and faded in their aspects, that while, on the one hand, we were feeling our way with the mildest preparation of mercury for the purpose of curing their disease, we were,

on the other hand, administering wine and cordials for the purpose of upholding their existence.

The success of mercury, under these unpromising circumstances, led first to the more general, and, finally, to the universal, employment of it. We resorted to it in every case of flux, where the remedies hitherto used had not satisfied our expectation. In short, we resorted to it in every case without exception.

But, as it became more and more obvious, that salivation was the condition of its success, there was no reason for restricting its use to one preparation only. Yet, at the same time, it was not enough that salivation should be procured in any way, gradually or at once, quickly or slowly.

Experience taught us, that its curative effect depended, in some degree, upon the manner in which salivation was brought about. Hence a choice and a discretion were to be exercised upon the kind of

preparation, the quantity and frequency of the dose, and its combination with other remedies.

Where the flux was attended with severe tormina, or colic, or cramps at the stomach; or where the attack was sudden, and recent, and accompanied with fever, it was doing nothing to prescribe small doses of hydrarg. c. cretâ and Dover's powder, which would produce their effect some days hence. It was expedient that the impression of the remedy should be in proportion to the force of the disease, and the rate of its progress. Accordingly, large doses of calomel and opium were given, to make the mouth sore immediately, or as soon as it could be done with safety.

In several cases, in which the agony from tormina and tenesmus was extreme, and the evacuations were enormously frequent, and consisted altogether of morbid secretions, or blood, fifteen grains of calomel and two grains of opium were given at a dose.

The patients, to whom so large a dose of calomel was given, were most attentively watched. Especial care was taken, that nothing should divert it from its influence upon the constitution, and that every accidental inconvenience that might accompany its operation should be rendered as tolerable as possible. If the griping increased, they had peppermint water to have recourse to; if it still increased, they were to be largely and frequently fomented with flannels wrung out of warm water; and if it still increased, they were to be supplied with small doses of laudanum at short intervals.

It will hardly be expected, that this single dose of calomel and opium could be effectual to the complete cure of the disease. The degree of relief, which the patient experienced the next day, and the changes which his condition had undergone in the mean time, determined the manner of proceeding in the further treatment of the case.

The dose of fifteen grains of calomel and

two grains of opium, administered under such emergencies as have been described, had almost always the effect of calming the symptoms; but the degree of relief it procured was various.

On the next day, we sometimes found, that the patient had past an easier night, that the evacuations had been somewhat less frequent, and the tormina and tenesmus had been somewhat moderated, but that, since the morning, the symptoms had become worse again, the pains were as severe as ever, and the evacuations as frequent, and quite unaltered in their appearance. Under these circumstances, fifteen grains of calomel and two of opium were given a second time.

Sometimes, the day after the first large dose of calomel and opium, we found the relief, which had been procured through the night, still maintained, and the appearance of the evacuations changed in some obvious respect for the better. Perhaps they were now free from all admixture of

blood, which they contained the day before. Under these circumstances, half the former dose of calomel and opium was given.

Sometimes, the day after the first large dose of calomel and opium, we found the patient exulting that he had been cured as by a charm; that he had slept all night, and his pains were gone; and that he had had several evacuations, of which the two or three last were almost natural. With this sudden improvement, salivation had either already arisen, or it was at hand. Under these circumstances, the use of mercury was either suspended altogether, or small doses of calomel and opium were given until ptyalism appeared, which was generally obvious at our next visit.

Our ultimate object, in all cases, was to produce salivation. But, in these cases of severer suffering, we found a salutary impression capable of being immediately produced by a few large doses, or even by one large dose of calomel and opium. This it was expedient to make the most of. Nevertheless,

this immediate salutary impression was soon lost, unless the same practice was followed up to salivation; for which purpose mercury was afterwards sparingly or largely exhibited, according to the circumstances, which have been set forth.

It was remarkable, that the constitutions of many were most slow and reluctant in admitting the peculiar influence of mercury, and that the disease, in the mean time, was still unyielding. In such constitutions, after calomel and opium, given internally, had failed of their accustomed effect, and now served to irritate rather than to soothe the bowels, we resorted to inunction; and salivation, thus procured, was productive of the same benefits.

As an object of pathological interest, it was instructive to observe the different modes of curative action, by which, under the influence of mercury, different constitutions set themselves free from their disease. In many the process of cure was so gradual, that there was hardly any perceptible *action*

engaged in it. The constitution seemed rather to lose the disease, one symptom after another, than to surmount it by an effort of its own. The pains became gradually less and less, until no pains whatever remained; and the healthy secretions gradually predominated over the morbid, until all were healthy.

In many the process of cure was by a sudden, vigorous, and painful effort, when the constitution threw off its disease by a sort of critical paroxysm. Sometimes the critical effort commenced as soon as the mercurial fœtor was perceptible in the mouth. Sometimes salivation would exist twenty-four hours before the crisis began; and sometimes the crisis preceded the salivation twenty-four hours. But it never took place but where there was salivation at the time, or immediately before, or immediately after.

The critical effort was of this kind. After a calm, procured by one or two large doses of calomel and opium, or after the employment of inunction for two or three days, the

constitution would become suddenly roused, and a very severe griping would arise, and then a sensation would follow, as if the bowels were filling and distending themselves with something, and, afterwards, an uncontrollable urgency to stool. With the evacuation came the relief of all the preceding misery. The stools were entirely changed. A few hours before, they consisted, perhaps, of slime or blood, or some colourless turbid fluid. Now they were a colluvies of the foulest, blackest matter, and of every kind; heavy ropy mucus and bile formed a considerable part of them. After one or two such evacuations the patient felt himself entirely restored and well. It generally happened, however, that the same sort of paroxysm returned, and was terminated by the same kind of relief. Thus, after a whole night spent in a succession of these critical paroxysms, the patients were found, the next day, bathed in a warm perspiration, and fast asleep; and, from this time, the evacuations from the bowels became natural and healthy.

Such is the history of our employment of mercury; and such was its success in the various forms of bowel complaint which have been described. Beset with all those doubts concerning the propriety of using it, which the previous history of the disease of the Penitentiary was calculated to suggest, we were, at first, driven to make trial of it by the failure of every other remedy. We began, therefore, and proceeded with the greatest caution, venturing no further than observation did (as it were) lead us by the hand. Thus, gradually making good our ground, we succeeded, at last, in exploring experimentally a very large field; and learnt how, by varying its preparations and its dose, and varying also its combinations, to adapt this same medicine safely and successfully to the exigencies of the disease under many different forms.

CHAPTER IV.

THE DISORDERS OF THE BRAIN AND NERVOUS
SYSTEM.

MUCH still remains to be added to the description already given of the disease prevalent at the Penitentiary, in order to fill up its entire character. Hitherto the description has been chiefly conversant with certain symptoms apparently contingent upon it as a disease of the bowels, and with the treatment which had respect to it as such; and thus the history of the disease has (as I proposed) strictly kept pace with my own observation and knowledge. For as it was gradually only that it discovered its entire character, so it was gradually only that we learnt to regard it, neither as a dysentery, nor a diarrhœa simply, nor belonging exclusively to the bowels, but pervading other

organs and systems of organs, and, in fact, belonging to the whole constitution.

No part of the disease was more striking and characteristic, none more formidable and difficult to treat, than that which declared itself through the medium of the brain and nervous system.

In our Report of the 5th of April, 1823, we remarked that, in all who had suffered either scurvy or dysentery, “there was found the same constitutional derangement, denoted by a sallow countenance, an impaired digestion, diminished muscular strength, a feeble circulation, *various degrees of nervous affection, as tremors, cramps, or spasms, and various degrees of mental despondency.*” Now these various nervous affections are here mentioned, only as symptoms of constitutional weakness; for in that light they were certainly regarded by us at the time. It is true, two prisoners had already died suddenly, after symptoms immediately referable to the head, and some instances had already occurred of very frightful convulsions. But

hitherto we saw no reason to conclude that these cases had any essential connexion with the predominant disease. In process of time, however, disorders of the brain and nervous system became more and more frequent, and of various kinds, head-ach, vertigo, cramps, and twitching of the limbs, delirium, convulsions, and apoplexy. But since these disorders did not immediately discover themselves in all their variety and magnitude, it was not until after much observation, that we were enabled to tell their genius and character, and to know that they constituted one form of the predominant disease; that they were not contingent upon the flux, nor the flux contingent upon them; that either might exist separately, although they were generally found in combination; and that both arose from a morbid condition, essentially the same, but falling upon different parts.

I shall best convey a notion of what these nervous affections were, by following the order of my own experience concerning

them, and describing them as they fell under my own observation.

Upon our first visiting the Penitentiary, out of seventy men, whom we found in the infirmary, there were five who had no other complaint but severe head-ach, three who had no other complaint but cramp in the limbs, and one who had cramp in combination with diarrhœa; and, out of ninety-three women, whom we found in the infirmary, thirteen had simple head-ach, three had no other complaint but cramp, and five had head-ach combined with diarrhœa. We did not, however, from these cases, at all suspect that the predominant disease involved the brain and nervous system.

We had not, however, been in attendance more than a week, when a man (Robert Dyer), thirty-one years of age, in the infirmary, and suffering cramp and diarrhœa, died suddenly, apoplectic. Upon dissection, we found the vessels of the brain slightly turgid with blood, and a few spots of ecchy-

mosis in the intestines, although there had been no scorbutic appearance upon the skin.

About ten days afterwards, a woman (Harriet Church), twenty-six years of age, whom we had found in the infirmary, suffering head-ach, began to exhibit a strange perverseness, which was rapidly aggravated to mania, and she died. Upon dissection, no morbid appearance was found beyond a very slight congestion of the blood vessels of the brain; so slight, that its existence might be doubted.

Soon afterwards, as we were one day going round the infirmaries, our attention was called to a young woman (Louisa Cornforth) who was suffering the most agonizing spasms. Her legs and arms were as rigidly tense as in tetanus. Suddenly she gave a loud shriek, and her eyes were fixed, and she became as pale as death. No pulse could be felt, and her breathing was only just perceptible. By æther and ammonia, and all the means of stimulating within our reach, we succeeded in rescuing her. In two or three minutes perhaps (but it is not easy to reckon time

on such occasions), we could feel the pulse beginning to undulate, and see the countenance beginning to redden, so that it was evident that the blood was in motion again. Then her eyes began to pass from object to object, and it was plain her consciousness had returned. She could not yet speak; but, by inarticulate sounds, and by the motion of her hands around the heart and stomach, she made us understand, that it was there the sudden agony had seized upon her. This young woman survived six weeks; and, in the mean time, all her dreadful symptoms frequently recurred, and her existence was upheld, from hour to hour, by the most potent stimulants. If she was left more than a certain period, without a small quantity of brandy, her pulse became imperceptible; but it was felt again, as soon as the stimulus was again applied. And, in this manner, even for as long a time as six weeks, existence was still maintained, while it was continually tottering upon the verge of dissolution. Before her death, diarrhœa was added to her other complaints. Upon dissection, nothing was found at the origin

of the nerves, to account for the dreadful symptoms referable to them. At intervals, throughout the intestines, there were small circumscribed patches of red, occasioned by blood accumulated in the small blood vessels; but there was no ecchymosis.

These three cases occurred in the month of March; and, occurring (as they did) among various other nervous affections, they may be thought to have excited in us a suspicion, at least, that the disease of the Penitentiary did not belong exclusively to the bowels. Still we wanted further experience, to assure us of the fact.

Early in the month of April, the bowel complaints and the scurvy, in which the peculiar disease of the Penitentiary (as we then thought) exclusively consisted, almost entirely disappeared. The scurvy, indeed, never returned; but the bowel complaints returned before the end of April, and spread throughout the prison more extensively than before. With them there appeared nervous affections of every kind, and of that kind

especially, which betrayed itself in cramps of the muscles. The character and the frequency of these cases were very remarkable. They occurred both to those who had, and those who had not, bowel complaints, to men as well as women; but it was in the women that, from their severity and the frightful circumstances accompanying them, they occasioned us the greatest alarm.

Many women were affected nearly in the same manner as Cornforth had been, and our apprehension was that they would all come to the same miserable end. They had cramps in the limbs and in the trunk. A few had that indescribable agony at the heart, and the pit of the stomach, bringing with it those frightful circumstances which seemed to threaten instant dissolution. Their life was again and again brought into jeopardy; but one only (Sarah Farley) eventually died.

Upon our first visiting the Penitentiary, we found this young woman (her age was only twenty-three) slightly affected with

scurvy, and complaining of diarrhœa, which she had suffered occasionally for many weeks. As she became convalescent from these disorders, there arose a succession of complaints in every part of her body, and with them that frightful agony at the pit of the stomach, which occurred in the case of Cornforth. It was not a sinking merely, but an evident spasm, attended with severe pain. She lingered, too, in the same manner as Cornforth, and her existence was upheld by brandy and laudanum, but not for so long a time. For several days previous to her death, a remarkable lividity appeared upon the extreme parts of her body. Upon dissection, small vascular patches were found in the mucous membrane of the intestines and nothing more.

Now, in all such cases, where there had already been cramps of the voluntary muscles, and sudden pains within the chest, or at the pit of the stomach, followed by a failure or suspension of the circulation, it must necessarily be believed, that an impres-

sion was communicated through the nerves expressly to the heart.

One instance occurred where, without previous spasms of the extremities, or pains within the chest, and without any forewarning symptoms, the functions of the heart were suddenly suspended, and the patient died.

Charles Thomson (aged twenty-nine) had suffered a degree of scurvy, which was comparatively severe. He was one of the few in whom the extravasated blood had formed large blotches upon the legs; whereas, in the generality, it had appeared only in spots or specks. Of the scurvy, however, no traces now remained. He had also suffered diarrhœa, from a period long before we first visited the prison in the month of March, with short respites, down to the month of June. His bowel complaint still continued in a mitigated degree. He was much emaciated, and his feebleness confined him almost constantly to bed. He was in a very precarious

state, but he did not yet bear the marks which denote the near approach of death.

On the 24th of June, I had been speaking with this poor fellow about his complaints, and he had distinctly told me he was better; when, feeling his pulse, I remarked extraordinary intervals between the beats. I called to Dr. Roget, who was at the bed-side of another patient, to come and feel it; and while I was in the act of passing his hand from my own to Dr. Roget's, his head fell back, and, *to all appearance*, he was dead.

We believed he was actually so. We applied warm fomentations over the whole surface of the body. Still there were no signs of life. Several persons were employed together in rubbing and irritating the extremities. It seemed as if several minutes had passed, and still he was dead; but a tinge of red was now seen running along his lips, which was the first sign of life; and then he breathed, and then his pulse became perceptible. With life, sense and consciousness

were not immediately restored; and, as soon as the circulation was re-established, there arose a violent convulsion of the whole body. When we left him, on this day, he was yet insensible. The next day we found him sensible, but learnt that he had had several convulsions. On the next day he died. Upon dissection, little patches of vascular congestion were found in various parts of the mucous membrane of the intestines, mixed with small circumscribed ulcers; also, increased vascularity of the brain, and fluid effused between its membranes, and into the ventricles. The heart was free from disease.

Among other cases of nervous affection, there were several of phrenitis. To a sudden and acute pain in the head was added, first, vertigo, then bewilderment of the intellect, then twitching of the tendons, then strabismus, and dilated pupils, and lastly, distortion of the mouth and hemiplegia. These symptoms sufficiently indicated what the disease was. But, unfortunately, we looked in vain for other symptoms which, in ordinary cases of phrenitis, are accus-

tomed to indicate what the remedy should be. In almost every case the pulse was most feeble. There was the disease, without the force of the circulation, which is deemed essential to maintain it. There was the disease, and, at the same time, a prohibition of the remedy, which is deemed essential to its cure. Happily, as these cases became more frequent, we learnt an effectual method of treating them. In the mean time, we proceeded, in great perplexity, adapting (as we could) common methods of treatment to the exigencies of these extraordinary cases. In a few, we ventured to try the effect of bleeding from the arm, sitting by the patient while the operation was performed; and thus, perhaps, when four or five ounces of blood had flowed, the pulse would falter, and we were compelled to stop; or we were compelled to stop when hardly a single ounce had been lost. I am sure there was no good derived from this practice, but, with all our cautions, I am not sure there was no evil. We put leeches upon the forehead, and found them of very uncertain effect. It was to extensive blis-

terings upon the head, and in its neighbourhood, that, for the present, we were obliged mainly to trust; and these remedies would check the symptoms, and postpone the progress of the disease, if they were fortunately employed so as to take effect at the time of its earliest formation. From this insidious inflammation of the brain, we lost two females, both of whom would, in all human probability, have been saved, if they had been submitted to the treatment which we eventually found successful. Upon their examination after death, we found an universal vascularity of the encephalon, and fluid effused between the membranes of the brain, and into the ventricles.

In process of time, disorders referable to the brain and nervous system prevailed, almost as extensively throughout the prison, as bowel complaints. In the majority of cases, indeed, they did not reach the formidable character which has been just described. They consisted, for the most part, of pain, and strange sensations in the head, and cramps of the limbs. But to this mere

head-ach was superadded, so often and so suddenly, vertigo, or delirium; and to these mere cramps of the limbs, was superadded, so often and so suddenly, a more terrible spasm of some internal organ, that we could not help seeing, in the minor affections, a tendency to some fatal result.

Sometimes, in going round a division of the prison, where the patients had all been in a state of improvement the day before, we found a dozen in bed, and were told, that they had severe pain in their heads, and that some were so giddy as to be unable to stand. The next day, perhaps, three or four of them had become delirious, and had twitching of the muscles, and were rapidly passing into that formidable state which has been described.

There were instances of individuals falling down suddenly, as if they were shot (thus the seizure was described by the by-standers), who, being brought into the infirmary, gradually rallied, and referred to the head as the seat of severe uneasiness. In these

cases, no symptoms of a more formidable kind ensued, in respect of the brain or nervous system. A permanent head-ach, or vertigo, was the common consequence.

The description and the instances, which have been given, plainly imply disease of the brain and nervous system, disturbing the functions of the different organs to which their influence extends.

If that part of the disease which belonged to the bowels, from its great extent, from the strangeness and diversity of its forms, and its intractability, under every form, by common remedies, was formidable, this part, which belonged to the brain and the nervous system, was surely not less so; for it, too, had put on many unusual shapes. It was daily increasing in extent, and was already found unmanageable by ordinary methods of treatment.

Moreover, the frequent suddenness of the attack threw a peculiar terror around many such cases, which was communicated to their

fellow-prisoners, who were looking on, and expecting themselves to be the next victims. The frightful sufferings of Louisa Cornforth and Sarah Farley, and the sudden death of Charles Thomson, struck such dismay into the sick prisoners, occupying the same wards, as was not easily appeased. It was expressed in their looks, and by their conduct, and especially by an aggravation of the form of disorder (whatever it was) that each was suffering at the time. This circumstance is peculiarly worthy of remark, since it raised new and unexpected obstacles to the medical management of the sick.

Thus far the flux of the bowels, and the disorders of the brain and nervous system have been spoken of separately, as if they were essentially distinct, and their occasional occurrence in the same individuals was merely accidental. In process of time, however, a belief arose of some natural alliance subsisting between them. As soon as the disorder of the brain and nervous system became co-extensive with that of the bowels, it had an equal claim to be regarded

as *the disorder* of the Penitentiary; and, as soon as both were not only co-extensive throughout the prison, but co-existent in the same individuals, almost constantly and inseparably, insomuch, that hardly an instance occurred of one being present without the other; and, moreover, as soon as the sole remedy of the one was found to be the sole remedy of the other, there seemed to be enough to constitute the requisite proof, that they were, in a certain sense (and that the most important sense), one and the same disorder.

Disorders may be different in the manner of declaring themselves, and may go by different names, according to the organs which they involve; and yet they may have in common one morbid condition of the system at large, from which they are derived, rendering them the same in their origin, and requiring them to be treated by the same remedy.

Thus does Nature often bring together what nosologies and artificial arrangements

have put farthest asunder; and thus does it become possible, that convulsions and dysentery, although in their symptoms they are absolutely unlike, may be essentially the same, and curable by one and the same remedy.

It remains to speak of the various disorders of the brain and nervous system, and of the various kinds of flux, as they were found in combination. For the manner of their alliance in the same individuals, and certain conditions which they possessed in common, seemed especially to lead to the belief that they were, in the sense which has been intimated, the same disease.

One condition, common to both, was the frequent suddenness of their accession; and there was an alarm connected with it which rendered it the more observable. Those who, to-day, were quite free from pain and disorder of the bowels, and appeared with the aspect, and with the perfect consciousness of health, to-morrow we found purging blood, or pure bile, or a turbid, watery fluid,

and completely beat down and mastered by their disease; and, in like manner, those who, to-day, had the same appearance and consciousness of health, and were alert and cheerful, and working at their trades, to-morrow we found so giddy, that they could hardly stand, or confined to bed with racking pains in the head, with twitching of the tendons, or cramps of the muscles, or even with delirium.

Here was an instant transition from the midst of health to the midst of disease in both.

But where the accession of the disease, either as it belonged to the brain and nervous system, or to the bowels, was not thus instantaneous, still there was often a condition common to both in the character of their premonitory symptoms.

There was a pale, and faded, and melancholy aspect, which, in process of time, had become so familiar to us, as the harbinger or attendant of the disease in all its forms, that we were accustomed to select from among

the prisoners those in whom it was most conspicuous, and send them into the infirmaries, for the sake of having them more constantly under our observation. Wherever this well-known aspect appeared, it was certain that the symptoms of real disease would soon arise; it might be from the bowels, or it might be from the brain and nervous system; and, in fact, it was as often from one as the other.

As to the alliance of these diseases in the same individuals, no form of nervous complaint was more common than head-ach and vertigo, and they were often combined with the bowel complaint in the following manner:

The attack was introduced by simple head-ach or vertigo, the bowels yet remaining in a perfectly natural state. Some of the patients thus affected, when the head-ach and vertigo were not urgent, were simply brought into the infirmary and watched; all medical treatment being postponed for the present. Others, in whom they were more

severe, were bled with leeches, or blistered, or had such *common* remedies administered to them as they seemed to require. But every patient, almost to a man, some the next day, some (the greater number) in two or three days, and some at a more distant period, were overtaken by some species of flux. The flux followed, whether the head was relieved or not, and when the flux was established, the head-ach or vertigo continued or ceased indifferently.

Another, and a frequent combination of nervous disorder with bowel complaint, was the following:—

Certain sudden seizures have been mentioned, arising from the brain, in which the patients were laid prostrate, at once, with some circumstances of alarm. These seizures were by no means of rare occurrence; and all who were thus attacked, if they were not suffering a bowel complaint at the time, were, to a man, inevitably overtaken by it in a day or two.

But this head-ach, or vertigo, or this sudden seizure, did not, in all cases, necessarily lead the way: often they came on in the midst of the bowel complaint, and at any stage or period of it.

The disorders referable to the head were not combined especially with any particular kind of flux. They were not more frequently found in cases which partook of the nature of cholera and dysentery, or in cases where there was fever and excitement of the circulation, than in those of slow passive diarrhoea, where the pulse was in its natural state, and the tongue perfectly clean.

Further, they did not seem to have their duration or their degree of severity at all determined by the character of the flux. Where the bowel complaint was of the mildest kind, and the shortest duration, the disorder of the head was often the most severe and the most abiding, and *vice versâ*.

What has been said of the head-ach, and

vertigo, and the sudden seizures referable to the brain, and the manner of their alliance with the flux of the bowels, may be said, with equal truth, of every other nervous affection which has been described.

The cramps of the extremities, and the internal spasms, and the order of symptoms constituting a low phrenitis, were found to proceed, or to attend upon, any period or stage of the flux indifferently, and to belong indifferently to any kind of it.

The cramps of the extremities were not exclusively, and scarcely in a more remarkable degree, attendant upon the cases of cholera, than upon other cases of bowel complaint.

With respect to the morbid appearances found in the bodies of those who died of such forms of nervous disease as have been described, I regret not to be able to speak with the precision I could wish.

They who are accustomed to dissections,

will agree with me, where the question is concerning slight watery effusions in any part of the body, that it is difficult to form an accurate judgment of their nature, if a considerable period has elapsed since the death of the patient. At the General Penitentiary, as in all prisons, a coroner's inquest was held upon the bodies of those who died, and no dissection was permitted until their verdict was returned. Hence three or four days elapsed before we could make our examinations.

The appearances upon dissection have been already anticipated. What we found, when we found any thing, was some degree of vascular fullness of the brain and its membranes, and some watery effusion between the membranes, and into the ventricles. Both were generally inconsiderable.

There were instances in which, during life, the symptoms were expressly referable to the brain, and in which death had taken place, by an immediate interruption of its

functions, where, nevertheless, upon dissection, we found nothing in the brain or its membranes apparently different from natural and healthy structure.

No examination was made of the spinal canal. The requisite means of doing it successfully were not at hand as in an hospital. I regret the omission; but the circumstances already mentioned, as calculated to perplex our judgment concerning what was found in the brain, would also have stood in the way of any satisfactory inference drawn from appearances of the same kind in the spinal marrow.

As, during life, the symptoms referable to the brain, and to the intestinal canal, were found to co-exist, for the most part, in the same individuals; so, after death, changes of structure were found, for the most part, in both organs. Hence another confirmation is added to the belief, that the diseases of both had a natural alliance, and in their origin were essentially the same.

Experience convinced us that common methods of treatment were not to be trusted, for any effectual good they could do to these various nervous disorders. They either failed entirely, or they fell short of the salutary impression they are accustomed to produce upon the same symptoms, occurring under ordinary circumstances.

It has been already intimated, both what the means were that proved unsuccessful, and what the principal remedy was upon which our reliance eventually rested. There is no need, therefore, to dwell long upon the details of treatment. It will be enough to state the general results of the practice adopted, and to make some few reflections upon the character of the disorders in question, to which the extraordinary failure of all the most probable means of cure, and the success of this particular remedy, seem naturally to conduct.

There are ailments concerning which physicians hardly allow themselves to feel the smallest anxiety, holding (as they conceive)

in their own hands the almost certain means of their relief. When, however, such ailments unexpectedly resist the remedies which are accustomed to cure them, they cannot help suspecting that there is more to contend with than the mere symptoms seem to imply. Thus simple pain in the head they are apt to think lightly of, until it is found incapable of relief by common remedies. Of such intractable cases the number (it has been seen) was very large at the Penitentiary.

Of pain in the head, *accompanied by vertigo*, they are apt to think a little more seriously, but still not very seriously, until simple remedies bring no relief; and intractable cases of this kind, also, (it has been seen) were very frequent at the Penitentiary.

Again, there are many, even acute diseases of vital organs, which physicians always regard with great apprehension, but which, with the advantage of seeing and treating them early, they nevertheless have a good expectation of bringing to a favourable termination. When, however, even

with this advantage, they absolutely fail in every case that presents itself, they cannot help experiencing some perplexity, and suspecting that there may be more in these diseases than they have been able to discover. Thus, when to pain in the head or vertigo, there are superadded cramps of the muscles, or twitching of the tendons, or delirium, or strabismus, they look upon the cases constituted of these symptoms with the greatest apprehension of the result; and there were (it has been seen) a few such cases at the Penitentiary. But even in the cases constituted of these symptoms, they do not look upon death as inevitable, until the remedies, upon which they are accustomed to rely, fail to make their ordinary impression. And thus it happened with the few cases of this kind at the Penitentiary; they passed, uninterruptedly, to their fatal termination, their symptoms hardly receiving the smallest check or abatement from the remedies employed.

Now, before we resorted to the use of mercury for the various forms of the disease prevalent at the Penitentiary, the state of

the prison, in regard to that form of it which involved the brain and nervous system, was this:—Seven had already perished under our own observation; of whom one died apoplectic, one maniacal, two with the symptoms of phrenitis, two from cramps referable to the region of the stomach and the heart, and one from symptoms belonging in part to the heart and in part to the brain; and there were not less than two hundred now labouring under various degrees of disorder belonging to the same organs. Of them a few only were dangerously ill in respect of the magnitude of their symptoms. These few were suffering that insidious form of phrenitis already described, while we were checking the symptoms and postponing the progress of their disease, with little hope of eventually saving their lives; and, unquestionably, they were in great present peril. But all the rest, though not in imminent danger from the magnitude of their symptoms, gave just cause for anxiety, from the consideration that they had not been cured by any means hitherto employed, and moreover that they were under the same conditions of

disease through which the seven had passed, before they reached their fatal consummation.

Such was the state of the prison in respect to the disorders in question; and it may well be conceived that, under great apprehension for the event of all these cases, and under great present alarm for a few, we sought most anxiously for the means of their more successful treatment.

At this time many patients, in whom mercury was first successfully employed for the cure of diarrhœa, were likewise freed from certain obscure nervous complaints; some from head-achs, and some from vertiginous sensations. This occurrence, while it served to strengthen the belief that the flux of the bowels, and the nervous affections, had a natural alliance, and were, in some sort, the same disease, determined us to give the same remedy a fair trial in its application to both.

And first, we most eagerly resorted to its use in those cases which occasioned us the greatest present alarm, *vis.*, in three cases of

insidious phrenitis. The patients already suffered subsultus of the tendons, and delirium, and one had strabismus. If life was to be rescued, it could only be by giving the remedy in such a manner as to bring the constitution as speedily as possible under its influence. Accordingly, as much calomel was prescribed, in repeated doses, and in combination with opium, as procured salivation in thirty hours; whereupon the most formidable symptoms were at once dissipated, and the patients were left in a condition favourable to recovery; and they eventually did recover.

Next we resorted to its use in certain cases which occasioned us peculiar perplexity, and some apprehension of distant consequences, but no present alarm. There were many individuals in whom an affection of the head had been originally combined with bowel complaint. The bowel complaint had been very slight, and of short duration, and had ceased altogether during many weeks. But the affection of the head had been very severe; and, although it had obtained a few

respites from common remedies, it still remained unmitigated; and at length all our medical expedients had lost the little temporary influence which they once possessed. There was every motive for trying the effect of mercury in these cases, and it was tried, and succeeded.

One of these cases was peculiarly striking, and is well worth relating as an example. Upon our first visit to the Penitentiary, on the 1st of March, we found, among the patients in the infirmaries, a young man of the name of Robson. He was twenty-one years of age; and told us that he had suffered a head-ach of the most excruciating kind during several months. His sight was dim, and he had a constant twinkling of the eyelids, and great agony was depicted in his countenance. He had moreover that faded, pale, and melancholy aspect already alluded to. Yet the functions of his bowels were performed naturally. His tongue was clean, and his pulse was of the natural frequency and strength. At this time the alliance between the disorders of the nervous system

and the bowels was hardly ascertained; therefore no inquiry was made whether he had suffered diarrhœa. Subsequently, however, we learnt that, during the preceding winter, his bowels had been twice slightly disordered for a few days. This poor fellow was under our constant observation and treatment, from the beginning of March to the end of June. He gained no respite from his agony, but by means of leeches applied to the forehead, day after day, for a week together, or by blisters kept open, or applied in quick succession behind the ears, or on the nape of the neck; and the respite thus obtained was of short duration: it might be for ten days; it was never longer than a fortnight; and then the same agony returned, and the same cruel treatment was to be resumed. In this case we eagerly resorted to the use of mercury; salivation was procured and maintained, to a certain degree, during several weeks. Whereupon the patient was released from his misery, and ever afterwards, during eleven months that I had the opportunity of watching him, he continued free from complaint of every kind.

The beneficial influence of mercury upon that part of the disorder of the Penitentiary, which belonged to the brain and nervous system; soon became as unquestionable as upon that which belonged to the bowels. It was proved upon the various forms, both of one and the other, and most conspicuously upon that form of each which occasioned us the greatest present alarm.

Before the use of mercury, it was impossible to contemplate the state of the prison, and not consider an extensive mortality as inevitable. Experience of its effects during a fortnight entirely changed our anticipations of the result, and encouraged a hope that, with great care and vigilance in its administration, the mortality would still be kept within narrow bounds. Thus, for every species of nervous complaint, as for every species of flux, whether they were combined or separate (for either might occur alone, although they were generally found together), we were led by our own experience to the employment of mercury.

Seeing that the head-ach and vertigo were often the first symptoms, and that they often subsisted a considerable time alone before the accession of others, we thought it expedient to begin the treatment of the disease, as soon as it shewed itself under this form, by our most efficient remedy. Our experience hitherto had been, that these affections of the head, when they were the first to declare themselves, were very seldom controlled, or in any way relieved by common remedies, and that, whether they were relieved or no, the flux almost inevitably followed. Treated with mercury, however, in the great majority of instances, they ceased; and, where they did cease under such treatment, in the great majority of cases, no flux followed.

Thus did this remedy effect the relief of both disorders, when they appeared in combination, and of each, when either occurred alone; and, in the latter case, under such circumstances occasionally, that it seemed to prevent the accession of the other.

In our administration of mercury for the relief of these complaints, we observed that, in the great majority of cases, no striking abatement of symptoms took place, until salivation was procured. Whether the very salivation itself was essential to the cure, cannot be determined; but being the only sensible effect of the remedy, with which the cure could be connected, it served us for guidance in the administration of it. Hence it always was our purpose to obtain salivation.

But we did not observe, upon the whole, that the abatement of symptoms was connected with any *certain degree* of salivation. Therefore we were, in every case, content with any, the least degree of salivation, under which they would disappear.

As in regard to the various bowel complaints, so in regard to the various nervous disorders, the condition most essential to the success of the remedy was unquestionably this, that the force and rate of its impression should be in proportion to the force and rate

of the disease. And the chief object of our care was to preserve that proportion.

Thus, where the disease was less severe, and was slow in its progress, salivation (without reference to its degree) was to be procured gradually; where the disease was more severe and rapid in its progress, salivation (without reference to its degree) was to be procured at once. Head-ach and vertigo which had come on tardily, and had abided many weeks, without any perceptible excitement of the circulation, were to be made to yield under the slow and alterative influence of mercury, which the constitution could bear without injury. Head-ach and vertigo which had been sudden in their accession, were accompanied with excitement of the circulation, and already seemed to threaten something beyond themselves, as convulsion, or delirium, or phrensy, were to be at once mastered by such a sudden and powerful impression of the remedy as the constitution would severely feel. Hence the quantity of the remedy was continually varied, according to the exigencies of particular cases. For some

we prescribed one grain or two grains of calomel, with a small quantity of opium, once or twice in twenty-four hours, and thus succeeded in procuring relief after the lapse of a week or ten days; doing no harm, in the mean time, to the general health and sensations of the patient. For others, we prescribed five, or ten, or even twenty, grains of calomel, with proportionate quantities of opium, once, or even twice in twenty-four hours; and thus succeeded in dissipating the symptoms at once, and in rescuing life at the expense of some present injury to the constitution.

CHAPTER V.

THE FEVER.

WHEN I was describing that part of the disease of the prison, which consisted of intestinal flux, I inquired how far it was attended by the symptoms which usually accompany such complaints, and serve to illustrate their nature. And with respect to fever I stated, “ that it was present in a few cases, but that the majority were entirely free from it, and that, where it did occur, its symptoms only reached a very moderate degree of excitement.” Now wherever, in cases of flux, and (I may add) in cases of disorders of the brain or nervous system, fever was present, the manner of their alliance was such as to raise a doubt, whether the fever was derived from the local disease, or the local disease from the fever.

For my own part, I believe that a fever arose at this time in the prison, which was *sui generis* and idiopathic, however its character might be obscured by an association with those forms of disease which have been mentioned. When this fever occurred alone (as it sometimes did, even at the time when the bowel complaint, and the disorders of the brain and nervous system were most prevalent), its type was manifestly peculiar. It was a fever of very moderate excitement, and generally went off in three or four days by perspiration. Or, if it failed of such relief, either spontaneously or by the help of medicine, it was apt to be protracted in the form of hectic during several weeks. When this fever occurred (as it generally did) in combination with some form of bowel complaint, or some affection of the brain or nervous system, its own peculiar type was still visible, notwithstanding certain differences which it exhibited correspondent with the disorder of a particular organ.

Further, since the fever and the local affection did not bear the same relation to

each other in the different cases where they were found combined, it might hence be suspected that they had no necessary alliance. Thus, in some the fever would first arise, and the flux would follow, perhaps immediately, perhaps not for several days, or perhaps not until the fever had been protracted in the form of hectic for several weeks. In some the flux would arise first, and then the fever would follow, perhaps immediately, or perhaps not until the flux had become a chronic disease.

But still, while the flux of the bowels and the disorders of the brain and nervous system prevailed to their largest extent, the cases of fever were rare. It was not until these complaints began to subside, that the fever shewed itself, in a sufficient number of cases at once, to make us accurately acquainted with its type. At no time did it pervade the prison to an equal extent with the other two forms of disease. But its extent, nevertheless, was such, that it had a just claim to be considered as a part of *the disease* of the Penitentiary; and the manner

in which it was mixed up with the disorders of the bowels, and the brain and nervous system, led to the belief that they had all a natural relation to each other, and that they all sprang from one and the same morbid condition of the constitution at large, and were all, in some sort, the same disease. It remains for me to give a more precise description of this fever, both alone, and in its combinations.

In many cases, a slight shivering, followed by heat and languor, and want of appetite, and a pulse ranging between ninety and a hundred, constituted the whole disease, and the use of common salines constituted its whole treatment. The patients being put to bed, began to perspire, and in three or four days they were well, with little loss of strength. Thus far it was the mildest and the most manageable fever I had ever seen.

In many cases, to the common symptoms of fever, were added pain at the pit of the stomach and head-ach; which together constituted the whole disease. In these cases,

an emetic, or a brisk purgative, followed by saline medicines, operated a speedy and effectual relief. Thus, when the stomach and bowels were cleared, and perspiration promoted, the patients were well in three or four days, with little loss of strength.

Now, with two or three exceptions, in which the lungs were affected, and hæmoptysis took place, the stress of the disease fell (if upon any particular organ) always either upon the stomach and bowels, or upon the brain, or upon both together; and in those who died, the brain, or the stomach and bowels, presented traces of recent disease. For the symptoms referable to these parts, mild as they generally were, yet were aggravated to an alarming degree in several instances, and were rapidly fatal in a few. A relation of some cases, in which these symptoms reached their greatest pitch of severity, will best serve to shew the formidable character under which the disease occasionally presented itself.

A young woman (Mary Chapman), aged

twenty-six, was attacked, like the rest, with the common symptoms of fever, except that she had a shivering fit, which was remarkably severe. After which, there arose a sudden and excruciating pain in every part of the abdomen, a vomiting of bilious matter, and a profuse purging of matter like tar. The patient sank at once into a state, from which it was evident that she could never rally. Her countenance was pale and full of terror; and, if she was moved, she was ready to faint away. After the lapse of twelve hours her pulse was imperceptible, and she was thought to be dying. Nevertheless, she survived four days; and, in the mean time, nothing could be attempted but to uphold life by such small quantities of wine or brandy as she could take. On the third day, her constitution in a manner re-acted, and her countenance was a little flushed. Soon afterwards her respiration became stertorous, and her mouth was a little distorted, and then she died.

After the first gush of matter from the

bowels, no further evacuations took place spontaneously, or could be procured by medicine. There was no tension of the abdomen, but, on the contrary, it was flat and soft to the last. Upon opening the cavity of the abdomen we found, here and there, throughout the whole course of the intestines, from the stomach to the rectum, large and extensive vascular patches, all of a very dark colour, and some absolutely black. The great end of the stomach, and the whole of the duodenum, were intensely black. The small intestines were, in several places, puckered up and contracted, for the space of an inch; and wherever these contractions were found, the bowel was of a deep black colour. Within the cavity of the abdomen, a small quantity of fluid blood (about two ounces) was found. It seemed to have exuded from the surface of the duodenum, just where its last turn commences, and especially from that part of it which is uncovered by peritoneum. It was just in this situation that the blood was found, and this part of the intestine was soaked in it. There was no effu-

sion of lymph, or of any other fluid within the peritoneum, but the blood above-mentioned.

The stomach, being opened, was found empty; and, at its great end, the mucous membrane seemed in one uniform state of ecchymosis. But this was not really the case; for when the stomach was held up to the light for inspection, it was evident that no extravasation had taken place, and that the apparent ecchymosis was occasioned by every vessel, great and small, in this part of the organ, being filled and gorged with blood. There was also this same appearance of ecchymosis in the mucous membrane of the duodenum, occasioned by a condition of the blood vessels essentially the same. Upon the valve of the pylorus, however, there were three small spots, where blood was actually extravasated. At the various spaces of the small intestines, which were black from without and contracted, there was the same apparent ecchymosis of the mucous membrane, which was, in fact, a remora and accumulation of blood within the blood ves-

sels. The whole tract of the intestines was filled with a matter resembling tar.

In the whole course of the bowels there was only one small ulcer. This was in a part of the small intestines, most free from vascularity, and seemed to be undergoing a process of reparation.

The vessels of the brain and its membranes were loaded with blood. But there was no effusion of fluid any where within the cranium.

This case occurred among many other cases of fever, in which symptoms were present expressly referable either to the stomach and bowels, or to the head, or to both. It could not but be regarded, therefore, as essentially the same, although it was distinguished from the rest by the extraordinary severity of those symptoms, and the rapidity with which it passed to its fatal termination.

In the following case the fatal symptoms

were more exclusively referable to the brain:—

It was our custom to visit occasionally the various apartments of the Penitentiary, to examine the prisoners who were *professedly* well, and to select from among them, for the purpose of placing under medical observation, any whose looks seemed to threaten the approach of illness. In one of our visits to the laundry, we found a young woman huddled up among some dirty linen, and lying upon the boiler, fast asleep. The fire of the boiler was put out, but some warm water still remained in it. Being roused, she looked strange and bewildered, but made no specific complaint. She said, “ I only feel cold at times, and this is a good way of warming myself.” The other women in the laundry considered that not much was the matter with her. As to lying upon the boiler, they told us, it was a fancy of her’s, and she often did it.

Nevertheless, from this very feeling of cold which she described, and from her ge-

neral appearance, we thought fit to remove her into the infirmary. Here we soon found that this sense of cold was the beginning of a fever. The next day her skin was hot and her tongue dry. The following day the stress of the disease had fallen upon the brain, and her head was in continual agony. As long as she retained her senses, she described the head-ach as most distracting. Then delirium arose, and the pulse lost all its power. And before a week had elapsed, she died with stertorous breathing, and with symptoms much akin to apoplexy.

The name of this woman was Mary Venables; she was in her twentieth year*.

But there were a few cases of fever nearly resembling those two fatal ones just de-

* I am not able to find the note taken of the morbid appearances, upon examination, of this patient. As far as I can trust myself to speak from recollection, the brain and its membranes were loaded with blood; fluid was effused into the ventricles, and between the membranes; and there were vascular streaks and patches in the mucous membrane of various parts of the bowels, but no ulceration.

scribed, and even approaching to them in the severity of the symptoms referable to the head and the abdomen, which nevertheless did well.

In many cases, after the common harbingers of fever, and at the time when the symptoms of re-action were expected, there arose a pain, like a fixed and unshifting cramp, at the pit of the stomach, and with it a most distracting head-ach; while the region of the scrobiculus cordis was most impatient of pressure. Whereupon the pulse became very frequent and feeble, and the countenance pale and full of terror. Clammy perspirations broke out, and brought no relief; and extreme sense of anguish seized upon the patient, and if he was moved he was ready to faint away. In this condition there was sometimes a spontaneous discharge of dark-coloured morbid colluvies, upwards and downwards, which put an end to the extremity of distress. Sometimes there was a discharge of turbid water only, by vomiting and stool, which was ineffectual for any purpose of relief. Sometimes there was a most

painful retching, a striving in vain (as it should seem) without vomiting, and consequently no relief.

The further description of these cases shall be accompanied by a description of their medical treatment, since it will serve to illustrate their nature.

It has been said, that there was sometimes a spontaneous discharge of dark-coloured morbid colluvies, upwards and downwards, which put an end to the extremity of distress. Hence it seems probable that, in the case of Sarah Chapman (described above) "the vomiting of bilious matter, and the profuse purging of matter like tar," constituted in themselves a curative effort. But the magnitude of the disease (as it appeared upon dissection) was insurmountable; and Nature, in the struggle for relief, went beyond the purpose which she intended, and thus occasioned a complete exhaustion of her own powers, from which she could never afterwards rally. An effect of the same kind, and produced in the same manner, is

occasionally seen in certain critical hæmorrhages.

But as to the cases now in question, as soon as there was a spontaneous gush of morbid secretion, upwards and downwards, then the cramp at the pit of the stomach, and the distracting head-ach ceased, and the pulse rose, and an universal warm perspiration followed.

Seeing then through what channels Nature succeeded in operating her own relief, we endeavoured, where there was need for the interposition of medicine, always to direct the remedies towards the same channels. Thus, when there was a discharge of turbid water only, by vomiting and stool, or an ineffectual retching, and nothing rejected, and the distressing head-ach still remained, and the cramp was still fixed at the pit of the stomach, we sought, by medicine, to procure the evacuation, from the stomach and bowels, of matter of a different kind, without which (as we conceived) there would be no relief; and this was effected by purgatives, but not by purgatives simply. If pur-

gative medicine alone was given, the evacuations were increased in quantity, but their quality was still the same. But if the means, calculated to soothe and to abate pain, were first successfully employed, together with the remedies calculated to dispose the bowels to remit their morbid action, then the administration of purgatives compassed the end we desired. Thus, first by leeches applied to the pit of the stomach, and by fomentations of the whole abdomen, with flannel wrung out of warm water, and by two or three grains of calomel, given every hour, or every other hour, for three or four successive times, and lastly (after all these several remedies had been duly administered), by a drachm of sulphate of magnesia, given hour after hour, until the bowels were moved, we seldom failed to bring away copious evacuations of a foul and dark-coloured colluvies, and thus to dissipate the severe epigastric pain, and the distracting head-ach, and with them all the danger of the disease*.

* These cases were so peculiar in themselves, and the mode of relief, whether spontaneous or by the help of

Now, upon these cases I have been induced to dwell more at large, on account of the express and paramount indications of treatment contained in certain peculiar

medicine, was so striking, that I may be permitted (in a note, at least) to make a few observations upon their probable pathology.

Formerly much stress was laid upon "turgid matter" and "morbid colluvies" in the first passages, as a cause of fevers; and certain distinctions of symptoms were thought to indicate that this colluvies was "pituitous" in one case, and "bilious" in another. At present, medical men are content to speak in more general terms of an accumulation of "morbid secretions," still regarding them as the cause of disease, and directing remedies for their removal. Emetics are given, and foul matter is rejected by vomiting. Purgatives are given, and the same is passed by stool. In consequence of which, the previous symptoms cease, or are greatly mitigated; and thus the theory is confirmed.

Nevertheless it may still be doubted whether the popular notion be correct respecting the actual condition of the stomach, at the time the symptoms referred to it are most intense; and still more, whether the matter rejected be really the "materies morbi," the accumulation of which produced the symptoms, which cease upon its evacuation.

It consists better with sound pathology to believe that, at the period of the severest local pain and severest constitutional disturbance, there is hitherto no accumulation

symptoms which belonged to them. These cases, however, were not essentially of a different type from the fever that prevailed in the prison at the same time. In them, indeed, its type was obscured or obliterated by the accession of the symptoms in ques-

of morbid matter within the stomach, but that its blood vessels are engaged in a morbid process, which, if its termination is favourable, will be finally resolved by a gush of foul secretion from their extremities.

That it is not any thing extraneous to the blood vessels which produces the symptoms, but the blood vessels themselves by their own morbid action, is rendered probable by the relief which leeches often procure, when they are applied to the skin immediately over the seat of the pain; also by the relief more effectually obtained by remedies which have an express influence upon the blood vessels, being employed together with purgatives, than by purgatives alone; for instance, by several doses of calomel, given in succession, at short intervals, and followed by senna or jalap, then by senna or jalap alone.

Further, a spontaneous vomiting will sometimes bring away from the stomach nothing but a turbid water, and a spontaneous purging will sometimes bring from the bowels nothing but a fluid which is thin, pale, and inodorous. Hence no relief follows. This striving of Nature is premature and ineffectual.

Moreover, emetics and purgatives will procure some-

tion, derived from the stomach and the brain. The sudden exhaustion, the clammy sweats, the rapid, feeble pulse, and pale countenance, were derived from both; while the stomach betrayed its disorder more immediately by severe pain and vomiting, or

times mere watery evacuations, upwards and downwards, and thus fail altogether of their curative effect.

The fact seems to be, that the vessels must first pour out the morbid colluvies into the stomach, before it can be rejected out of the body. This its separation from the blood vessels is the first and principal curative effort; its expulsion by vomiting or purging is secondary and consequential, and curative only in a less degree; but still necessary. Emetics and purgatives, so administered, as simply to procure its rejection out of the body, do good, in assisting the last process of the cure; but emetics and purgatives, so administered, as first to aid its separation from the blood vessels, and then its rejection from the body, conspire with Nature in every purpose she endeavours to effect, from the first to the last.

It appears, therefore, most probable, both from the course of the symptoms themselves, and from the efforts of Nature for her own relief, from the remedies, and from the conditions of their successful operation, that the disorder of the stomach, described as incident to the early stage of fever, is caused and maintained by a morbid action of a peculiar kind, in which its blood vessels are engaged at the time.

fruitless efforts to vomit; and the brain, by pain and delirium, or hurried and oppressed breathing, or diminished sensibility. But when the severe distress, belonging immediately to the stomach and the brain, and the overwhelming symptoms derived to the constitution at large, through the medium of these organs, were dissipated; if the fever still remained, it put on the same character, and pursued the same course with the fever of other cases, in which such symptoms had never appeared.

Now, the fever of the Penitentiary, both when it was a simple fever from the beginning, and when it was attended, from the beginning, by symptoms of the milder sort referable to the epigastrium and the brain, did generally disappear altogether within a week. But in some cases it was protracted beyond that period. Moreover, this fever, when it was attended, from the beginning, by the severer symptoms referable to the epigastrium and the brain, unless it proved fatal (as it did in a few cases) within a week, was generally brought to a favourable termi-

nation within the same period. But, in some cases, it still continued its course.

Here, then, it must be observed, as a thing most remarkable, respecting this fever, that whatever had been its character and progress hitherto, if it was continued into the second week, the type which now belonged to it was the same in all cases, *viz.*, the type of hectic. It was constituted of heat and perspiration, going and coming, with little intermission, and a frequent pulse.

When the fever arrived at this stage, we were at first disposed to leave it henceforward entirely to itself, administering no medicine, either with a view of abating the symptoms, or of pushing the patient into health; for the symptoms seemed such as would spontaneously wear themselves out. Experience, however, soon taught us the necessity of a more active interference; for the fever, being left to itself, contrary to our expectation, shewed no disposition to cease spontaneously. We were compelled, there-

fore, to resort to tonic remedies, and found them more beneficial the earlier the period at which they were administered. The salutary effect of such remedies was most strikingly manifest in those cases, where the accession was marked by symptoms of peculiar severity referable to the head, or the epigastric region. After these symptoms were dissipated, by the means already pointed out, and simple fever remained, bark and acid were required to prevent that fever from becoming a slow hectic of many weeks' duration. And, if the hectic had already begun, and continued for a time, bark and acid were the medicines which sustained the patient under it, and brought him safely through it.

I mention bark and acid more expressly, because from positive experiment it is certain that these remedies did good, while wine and (what are called) diffusible stimulants did harm. The employment of bark, to a good purpose, on the fourth or fifth day of fever, may, perhaps, startle modern ap-

prehension; but the necessity of it, and its success in these cases, were unquestionably proved.

In the cases in question, the whole secret of conducting the fever to a successful termination consisted—first, in not being deterred from using plentiful evacuations in the earliest stage, on account of the sudden pallor, and faintness, and feeble pulse, and apparent exhaustion (symptoms derived from the present oppression of particular organs); and next, in not withholding bark and acid (remedies which sustained without heating) as soon as the evacuations had relieved the internal oppression, and nothing but the fever and its symptomatic sweats remained.

Thus I have described the complaints prevalent at the General Penitentiary, as they fell under my own observation. These were a scurvy, a flux of the bowels, a disorder of the brain and nervous system, and a fever. All four, from their extent and frequency, had a claim to be considered *the disorders* of

the prison; and the manner in which they were often combined in the same individuals, and the way in which they were taken up and succeeded by each other, induced the strongest belief that they all sprang from the same cause, and were, in a certain sense, the same disease. This belief was further confirmed, in respect to two of them, the flux of the bowels, and the disorder of the brain and the nervous system, by the consideration that they were both amenable to one and the same remedy, and (as far as our experience went) intractable by any other.

What then (it may be asked) was the essence of the disease, considered as a whole? Of the inceptive error, or primary morbid action, from which it arose, I am entirely ignorant; whether it belonged to the blood vessels, or the nerves, or to what particular organ, or system of organs. I only know that its first cognizable effects were seated in the blood vessels, and that they consisted both in the admission of blood into their capillaries, beyond the natural sphere of the circulation,

and in its transmission through their capillaries out of the sphere of the circulation altogether; that the consequences were ecchymosis of the skin, and ecchymosis and vascular patches of the mucous membrane of the stomach and intestines, and determinations of blood to the brain and its membranes, and (probably) to the spinal marrow; and that, out of these, arose diseases which obtained different names, according to the manner of their occurrence and the parts upon which they fell, such as the scurvy, and the various species of flux, and the various species of nervous disorder, and some forms of fever, all of which were nevertheless still the same disease in the conditions of their production.

I am well aware, that the essence of the disease must have consisted in something prior to these effects, and productive of them. But the present state of our knowledge does not enable us to ascertain what it was; and, indeed, the search after the essence of any disease, beyond the point at

• which it begins to fall within the reach of the senses, has seldom brought the pathologist to any more certain conclusion than this, *viz.*, that it consists in “ a morbid disposition or action, which is *sui generis.*”

CHAPTER VI.

INTERCURRENT DISEASES.

THERE were certain other complaints in the prison at the same time, which were remarkable for their frequency, and some which were peculiar in their character. But whether they had any natural alliance with the reigning disorders, or were merely accidental, I cannot tell. Cases of erysipelas were constantly arising, and upon the whole were numerous. They were all slight cases, yet they lingered in their cure, although they all did well. An affection, not unfrequent among the females, was an inflammation and swelling of the labia pudendi. It was accompanied by a smart febrile attack, which lasted two or three days, and uniformly terminated in the formation of abscess, without further inconvenience. Accidental sores and

bruises were, with difficulty, brought to heal; and one young woman, whose hand had been injured by pearl-ash, suffered a sloughing of the integuments of the fore arm, by the spreading of the sore. In several individuals, the application of leeches to the surface produced extensive extravasations of blood beneath the surrounding cuticle. This effect was most remarkable in a boy (John Shaw, aged seventeen), who, during a painful and protracted illness, required their application to different parts of the body, at various times; and in all these parts a blotch of ecchymosis spread from the leech bite, as a centre, to a considerable distance. Nearly the whole thigh became black, in consequence of half-a-dozen leech-bites. The ailment, for which the poor boy required this treatment, was itself peculiar, and deserves a brief notice.

Early in May, he suffered an inflammation of the conjunctiva, which was cured by leeches. In the middle of the month, he had severe pain in the head, which was relieved by leeches. Next he had inflammation near

the knee-joint and shoulder-joint, and an inflammation and swelling opposite to the sacrum, which required the same treatment, and eventually matter formed in all these situations; lastly, the whole thigh became swelled, and painful, and hot, requiring the same treatment, until a large quantity of pus, mixed with blood, was discharged. These abscesses continued to form, in succession, during six weeks, accompanied by fever, of great intensity and excitement, and wherever a discharge took place, it continued ever afterwards. The poor boy died exhausted, on the 7th of July.

Another prisoner (George Prior, aged nineteen) suffered the same kind of disease with Shaw, but in a more chronic form. In the middle of the month of March, he had a soft tumour beneath the scalp, opposite to the left parietal bone. Soon afterwards, he had another soft tumour opposite one of the ribs. They were both about the size of a hen's egg. He became feverish, and his strength declined. The tumours were punctured, and pus was discharged; and for seve-

ral months the punctured orifices still continued open, and matter still came away. Afterwards, another soft tumour was formed opposite the sacrum, and became an abscess. He eventually died consumptive, on board one of the hulks, at Woolwich.

At the Penitentiary, there were some cases of diseased joints, where the complaint appeared a mere rheumatism in its commencement, but soon put on a more formidable character. In one instance especially, under the most careful treatment, with the advantage of rest and change of air, the knee-joint was rendered useless, and active disease, which would probably render the boy a cripple for life, was still going on, after the lapse of several months.

Now, I do not wish to lay an undue stress upon these cases. Unquestionably, occasional cases such as these are met with elsewhere, and under ordinary circumstances, when it is quite in vain to inquire their cause. But when, in the midst of an epidemic, certain other diseases, occurring at

the same time and under the same circumstances, yet not obviously connected with it, have an unusual course and termination, we cannot help suspecting that the same cause which engendered the epidemic, may have impressed upon them their peculiar character; especially if that character is such as to bring them into a similitude with the epidemic, as far as in their own nature they are capable of being thus approximated.

It was the custom of Sydenham (whom it is safe to regard both as an authority and an example), after he had described the epidemics of particular seasons, to dwell shortly upon certain other complaints, which had happened at the same time, and which he called intercurrents. In so doing, he would shew how, by the force of the predominant influence, their character was sometimes altered into a kind of conformity with the reigning disease; and thus he considered them as furnishing as strong a proof of the existence of such an influence as the epidemic itself.

These observations contain all the commentary I wish to make upon the preceding cases, and, at the same time, explain the reasons why I thought it necessary to take some notice of them.

To them, however, I must add one case more. It created great interest at the time, and some alarm lest this kind of disease should not be limited to a single case.

S. W. (middle aged), a nurse in one of the infirmaries, a large, corpulent woman, with a most florid countenance, and an habitual drinker of spirits, became suddenly ill. She had buboes in the left groin, and, at the same time, a bunion on the great toe, from the irritation of which the buboes were thought to proceed; and so, indeed, they might, for there was a streak of red running up the leg and thigh. The skin about the glands in the groin began rapidly to inflame. Fever arose, and with the fever spots of ecchymosis were scattered over the inside of the left thigh. The spots became more and more numerous, spread round the limb, and

coalesced into one large patch, which became completely black. In the mean time spots of the same kind appeared on other parts of the body, on the other leg and thigh, on the hands and arms, and loins and back. They coalesced here and there into large patches, and were universally black. Then there was purging of blood; not a copious discharge of unmixed blood, but of blood tinging other matter evacuated from the bowels. The pulse sank so as to be scarcely perceptible. The buboes in the groin inflamed and suppurated and sloughed, and emitted a horrible fœtor. The cuticle over the ecchymosed patches was, in several parts of the body, raised into vesicles. The hands and feet became cold. Still the intellect was perfect; the stomach hitherto had not failed, and she was continually upheld with wine and brandy.

Five or six days were occupied by the disease passing through these stages, and arriving at this condition, which seemed hopeless. From this condition, however, the constitution made a vigorous effort to rally.

The pulse first became perceptible, and then a little warmth returned to the skin. The discharge from the buboes changed its quality, the fœtor abated, the slough was thrown off, and the edges of the wound became firm and healthy. The spots and patches of extravasated blood changed from black to brown, and their margins were florid. The vesicated cuticle peeled off, leaving no sore, and a new cuticle was formed beneath it.

Under these favourable changes, it was still necessary to uphold the circulation by brandy. It was thought one day that the brandy might be dispensed with. It was so. But the next morning her pulse had become so much more feeble, and the circulation was so obviously leaving the extremities, and the patient was altogether so sunk, that the brandy was again eagerly resorted to, and with effect; for in a few hours the extremities became warm again, and the pulse rose.

There were still various changes favourable and unfavourable for a week. The fa-

vourable, were the improved complexion of the wound, and the partial fading of the ecchymosed spots. The unfavourable, were an occasional coldness of the extremities, and the impossibility of sustaining the circulation but by the continual administration of brandy. This was a state of things that could not last long. By continual watching, however, she was still kept alive, until, on the 20th day from the commencement of her disorder, she died.

Upon examination, after death, the intestines were of a dusky brown colour externally, while they exhibited, at irregular distances, spots and patches which were absolutely black. This appearance was derived from the condition of the mucous membrane, which was generally loaded with blood, but in a very few places only in a state of ecchymosis. Some portions of the bowel, that were of the deepest black, being held up to the light for examination, shewed distinctly that the blood was contained within its vessels. The number of ecchymosed spots, throughout the whole tract of the in-

testines, did not exceed six, and the size was not greater than the diameter of a pea. They all appertained to the mucous membrane. In the ilium, just at its termination with the cæcum, there was a very superficial ulceration of the mucous membrane, about two inches in circumference. The valve of the cæcum was especially loaded with blood.

The liver was pale; the spleen was exceedingly soft. In the chest, numerous spots of ecchymosis were found upon the pleura covering the ribs of both sides. Their size varied from a mere speck to a patch two inches in diameter. On the pericardium, both on its loose and reflected portions, the same appearances of ecchymosis were very strikingly exhibited.

This case appeared to me of sufficient importance to require that all its particulars should be recorded as they were noted down at the time. I know not with what form of the predominant disease it ought to be classed, and therefore I have placed it alone. There is, indeed, an extreme possibility that

it was merely an accidental case, and that the patient might have suffered in the same manner wherever she had been. But taking the most prominent symptoms, and the morbid appearances found upon dissection together, we must consider them as furnishing an almost certain proof that the disease was essentially the same with the reigning disease of the prison, and had derived itself from the same source.

CHAPTER VII.

REVIEW OF THE EXTENT OF THE DISEASE AT
DIFFERENT PERIODS — UNCERTAINTY RE-
SPECTING ITS CAUSES.

THE following tables will serve to shew the extent of the disease, from the numbers under medical treatment, at different periods during the month of May, June, and July:—

Prisoners under Medical Treatment, on the 15th of May,
1823:—

	Men.	Women.	Total.
Diarrhoea { Ill	- - 46	- - 44	- - 90
{ Better	- - 48	- - 87	- - 135
{ Well	- - 49	- - 20	- - 69
Other complaints	- - 21	- - 30	- - 51
Total	- - <u>164</u>	- - <u>181</u>	- - <u>345</u>

On the 23d of May:—

		Men.	Women.	Total.
Diarrhœa	{ Ill	- - 63	- - 46	- - 109
	{ Better	- - 51	- - 56	- - 107
	{ Well	- - 64	- - 47	- - 111
Other complaints	- - 24	- - 36	- - 59	
Total	- - -	<u>202</u>	<u>184</u>	<u>386</u>

On the 11th of June:—

		Men.	Women.	Total.
Diarrhœa	{ Ill	- - 73	- - 35	- - 108
	{ Better	- - 86	- - 38	- - 124
	{ Well	- - 82	- - 88	- - 170
Other complaints	- - 24	- - 28	- - 52	
Total	- - -	<u>265</u>	<u>185</u>	<u>454</u>

On the 3d of July:—

		Men.	Women.	Total.
Diarrhœa	{ Ill	- - 17	- - 22	- - 39
	{ Better	- - 70	- - 37	- - 107
	{ Well	- - 179	- - 83	- - 262
Other complaints	- - 8	- - 22	- - 30	
Total	- - -	<u>274</u>	<u>164</u>	<u>438</u>

In these tables we designated as “Ill,” those whose disease was either progressive

or stationary; as "Better," those who had already lost some symptoms of their disease, and made some advance towards health; and as "Well," those who were well, so far as they were free from the symptoms of disease, yet not *strictly well*, inasmuch as they were judged still prone to relapse, and were still the subjects of medical observation and care.

It is necessary to observe, respecting these tables, that they are the same which were presented to the committee. In them diarrhœa alone is mentioned, being put for every species of flux which has been described, and no separate enumeration is made of nervous complaints and of fevers, which have been considered as *the disease* of the prison, equally with the flux of the bowels. The fact is, it was late before we ourselves arrived at the conclusion that they were really so. Hence, when they occurred alone (and this was rarely the case), they were placed among the "Other Complaints," or accidental disorders of the prison, until they were certainly known to be peculiar to it;

and when, as it happened in the great majority of cases, they were combined with bowel complaints, it was thought enough to specify that which was the more notorious disease.

Thirty prisoners died at the Penitentiary while Dr. Roget and myself were in attendance; of whom thirteen were men, and seventeen women. Twenty-two fell victims to *the disease* in some of its forms, and the remaining eight to complaints which had only a suspected connexion with it, or none at all.

Of the thirteen men—

- 7 died of the various species of bowel complaints.
- 2 — of disorders of the brain and nervous system.
- 2 — of fever.
- 1 — of abscesses, which had a suspected connexion with the reigning disease.
- 1 — of struma, which had no connexion with it.
This man died by accidental suffocation. A mass of diseased absorbent glands occupied the whole space between the ears and the clavicles on both sides, and met in front of the trachæa. His respiration was habitually oppressed; he was under medical treatment

in the infirmary, and one morning he was found dead, with his countenance swollen and livid.

Of the seventeen women—

- 4 died of the various species of bowel complaints.
- 5 — of disorders of the brain and nervous system.
- 2 — of fever.
- 1 — of hepatitis, which had a suspected connexion with the reigning disease.
- 1 — of diseased spine, which had no connexion with it.
- 4 — of phthisis, which had no connexion with it.

When the last of the tables, given above, was presented to the committee, it was accompanied by the following observations:—

GENTLEMEN,

IN presenting our Report of the present state of the Penitentiary, we must be permitted to accompany it with a few observations.

When we were first engaged at the Penitentiary, it appeared to us important to determine the period at which the diseases we had to treat began to prevail; and for this information we resorted to the testimony of the prisoners themselves. Owing, however, to certain suggestions made to us by others, we were led to distrust the statement of

prisoners respecting their own complaints, unless it was confirmed by other circumstances; and thus we were able to trace only a few cases of either diarrhœa or scurvy back to a remoter period than Christmas.

But our greater experience of their conduct and character has led us to give further credit to the prisoners' own statements; and from the uniformity and consistency of their testimony, we have no doubt that both diarrhœa and scurvy prevailed most extensively throughout the prison at an early period of the autumn. Not longer than a fortnight after the diet was changed, in July, the disorder of the stomach and bowels began first to show itself. Even in the very month of July a few of the prisoners suffered vomiting and diarrhœa. These (as we judge from the manner in which they occurred) were unquestionably owing to the disagreement of food. They ceased and recurred at intervals. The prisoners themselves thought lightly of them, and did not make them a subject of complaint either then or at a much later period. Hence (as we have observed in a former report) no blame is imputable to the medical officers, that they went for a long time undiscovered.

Nevertheless the fact is certain; and it is no wonder, therefore, that the diarrhœa especially, which had been so long unrestrained by any effectual treatment, should at length have proved an intractable disease, and been protracted by a succession of relapses nearly to the present time. For this complaint (independently of other circumstances connected with it) is, according to the length of its duration, always suspected of being maintained by a disorganization of (what is called) the mucous structure of the bowels.

Such disorganization, in its least and lowest degree, is reparable tardily only, and with difficulty; and in its greater degree, it is altogether irreparable.

In our Report to the Committee of the 5th of April, we ascribed the forms of disease then prevalent in the Penitentiary mainly to the influence of diet and cold, and our opinion has been confirmed by that of other physicians who have been consulted upon this point. But many prisoners admitted since the diet thought to be injurious, has been changed, and since the weather has become milder, have become the subjects of dysentery; and several of the officers of the establishment most employed about the sick have suffered the same disease.

Unquestionably, then, we do believe, that some injurious influence has been in operation, over and above the causes to which the epidemic was originally imputed. This injurious influence may have been present from the first, or it may have been subsequently superadded. Whatever it be, it has hitherto eluded our detection; and, whether it is, or is not in operation at present we cannot tell.

If it consist of contagion (and such possibly may be the case) dysentery will still probably linger in the prison, as long as any remain there who have not suffered it; and then it will entirely disappear. If it consist of something peculiar to the place, or to the season, or to the moral and physical condition of people so confined, it may be still capable of renewing the same disease, or of creating another form of epidemic.

We are aware that the public mind is impatient to be satisfied as to the causes which, from first to last, have produced and maintained the various forms of complaint in the Penitentiary. Upon this subject we wish to dwell for

a moment, in order to show that the satisfaction which is sought cannot be obtained.

The causes (the exciting causes, as they are called) of diseases are involved in much uncertainty; and when the question is concerning an extensive epidemic, this uncertainty is felt, and confessed to be most painful: still the inquiry into these causes can never be hastily dismissed; for to discover what they are, and to remove them, if they are within our reach, may be essential to the effectual cure of the disease.

With respect to the Penitentiary, then, while we confess that there has been, and still may be, a cause of disease in operation, which we are ignorant of, we are most anxious for the committee to feel convinced, that the fault does not entirely rest with us that it remains undiscovered, but that the difficulty of detecting it is inherent in the subject itself.

We beg to state, that opinions respecting the causes of diseases are formed, not from the mere observation of one or two things immediately obvious to the senses, but from a cautious investigation of a great variety of circumstances, and from a series of reasoning upon them.

It is obvious that opinions necessarily so formed, are very liable to error; and hence it happens, that no prudent physician ever arrived at conclusions about the causes of a disease, with so certain a conviction that he was right, as not to confess that he might possibly be wrong.

Numerous cases in the Penitentiary, to which we have already alluded, have seemed to us quite inexplicable, except upon the presumption of contagion. The fact may be otherwise; and authorities (we are aware) preponde-

rate against the contagious nature of dysentery; nevertheless, we have not thought ourselves justified in neglecting the practical measures which the facts before us appeared to suggest, until medical opinion is settled upon this point.

We beg to add a few remarks upon the table just delivered in, which represents the number of prisoners at present under medical treatment.

In this table the committee will see with satisfaction, how small a proportion those who are now suffering the severer symptoms of the disease, bear to those who are convalescent, and to those who are well.

Nevertheless, it may appear strange to the committee, that so many should be still kept under medical observation and treatment, who as far as health is attested by the absence of all symptoms of disease, are perfectly well: in them, indeed, the disease may be effectually cured, and we trust it is; but the instances of relapse, after many weeks of apparent health, have been too numerous to allow us to dismiss all apprehension concerning them.

How to obtain for those who have already suffered the disease, and are now apparently well, an effectual security against relapse, has become our chief care and anxiety. This security (as it seems to us) can be procured only by guarding them from the influence of all things that are obviously injurious, and by still keeping them, in a moderate degree, under the influence of the same remedies which have thus succeeded in restoring them to health.

For ourselves we must be allowed to observe, that we have never felt the responsibility of our charge so sensibly as at the present moment. While we were engaged in actively ministering to above 400 sick, we were not at leisure

for useless anxieties; but now that we have time to reflect upon our situation, and consider that the public still holds us responsible for the employment of all possible means for protecting this vast establishment against the recurrence of the same terrible visitation, and the invasion of any new epidemic, we cannot refrain from begging of the committee, that they would be pleased to grant us the benefit of consulting with some physicians of eminence and authority, who may either confirm us in the means we are using, or suggest others more effectual.

We are not disposed to look with despondency upon the state of the Penitentiary. There is one event, however, which, under the most fortunate circumstances, will unquestionably come to pass, and it is proper that the committee should be informed of it.

If we were sure that, from the present time, all causes would cease to operate for the renewal of the same disease, and for creating any new form of epidemic, and if we were sure, that all who have suffered the disease were henceforward secure against relapse, still we must entertain the confident belief, that among nearly 500 persons who have suffered so long and so severely complaints peculiarly apt to debilitate the general frame, many will be found, whose restoration to complete health will be tardy, difficult, and precarious, and who, in the meantime, will be ready to fall into any diseases to which the constitutions of each may have an original proclivity. Hence, we foresee, that independently of any general or epidemic complaint, there will arise from time to time in the Penitentiary, occasional cases of complicated and anomalous disease: of these cases some may be trivial, but others will

be formidable, and a few fatal; and they will be as various in their characters as the constitutions of individuals are various.

We cannot close this Report without thanking the committee for the uniform kindness and confidence with which they have regarded our labours. We have (we can assure them) most anxiously and scrupulously reviewed all the practical measures we have employed during the prevalence of this most formidable and extensive epidemic. These measures were adapted to emergencies as they arose, with as much care and deliberation as circumstances would allow; yet, upon reflection, we conscientiously affirm, that we discover no error which we desire to palliate or amend, and see no suitable remedy or medical expedient which we have omitted to use; and that, should we again be called upon to treat the same malady, we should only study to retrace our own footsteps, and should employ the same remedies and medical expedients with an increased confidence in their success.

(Signed) P. M. LATHAM, M.D.

July 4th, 1823.

P. M. ROGET, M.D.

Our purpose in this Report was to intimate to the committee, that the disorder *as a flux*, had been of longer standing in the prison, than we had at first been led to believe; that its origin could not be *exclusively* owing to those causes to which it had been imputed; that there had been, and perhaps

still was, some cause in operation, the nature of which had not been discovered, and might not be discoverable; that there was a suspicion of contagion, and a suspicion of local injurious influence, but nothing ascertained about either; that the extent of the disease was at present greatly diminished, but that all the prisoners were in a state of health, which (to say the least) was dangerously valetudinary; that disease was still to be expected in some form, either in the shape of relapse, or of some new epidemic, or of those various complaints which are the consequence of debility.

The date of this Report marks the time at which the disease of the Penitentiary had come to a kind of pause. Nevertheless, the many apprehensions and doubts which we felt, as to what might happen, and a very painful sense of responsibility, led us, for our own satisfaction, and the satisfaction of the public, to ask for further medical assistance. Our request was made known to the Secretary of State, who directed the College of

Physicians to appoint whom they thought fit. The College appointed four physicians of hospitals—Dr. Hue, Dr. Macmichael, Dr. Chambers, and Dr. Southey. Three only of the four undertook the charge. Dr. Chambers's professional engagements obliged him to decline it.

CHAPTER VIII.

REMOVAL OF THE PRISONERS FROM THE PENITENTIARY, AND ITS INFLUENCE UPON THEIR HEALTH.

WITHOUT calling in question, for the present, the salubrity of the situation of the Penitentiary, it seemed to Dr. Roget and myself, that the best security against the return of the old, and the appearance of any new, forms of disease, would be obtained by change of air and change of place. To individuals in private life, after long illness and frequent relapses, physicians are accustomed to recommend change of situation as indispensable to their recovery. But such a recommendation, when the question was concerning several hundred convicts, would (we thought) be nugatory, from the impossibility of carrying it into effect. Nevertheless, by

the zeal of the committee, and the special activity of the visitor, Mr. Holford, and the aid furnished by government, through the earnest interference of Mr. Secretary Peel, it was entirely accomplished; and all the prisoners, both male and female, were eventually removed from Millbank to situations deemed more eligible for the recovery of their health.

The Ophthalmic Hospital, in the Regent's Park, being vacant, was made fit for the reception of female prisoners, and 120 were removed thither from Millbank, between the end of July and the beginning of August. The Ethalion hulk, at Woolwich, was prepared for male convicts, and 200 were sent on board it, between the middle and the end of August.

The prisoners, both male and female, selected for removal, were those who had suffered the most severe and the most frequent attacks of the disease in all its forms; and the effect which change of air might have upon them was to determine how those were

to be disposed of who still remained at Millbank.

The care of the prisoners at Millbank, and at the Regent's Park, was now divided between Drs. Roget, Hue, Macmichael, Southey, and myself; while we all paid frequent visits to those on board the hulks, who were under the immediate care of Mr. Bayles.

The benefit of change of air and situation was immediately apparent, both upon the women at the Regent's Park, and the men at Woolwich. In a fortnight after their removal, there was much less complaint of illness among them, and their general aspect bore the appearance of returning health.

In the mean time, the prisoners who remained at Millbank, amounting to about 100 women, and nearly 300 men*, were stationary as to their general health, while

* I cannot state the exact number, since it varied from time to time, on account of the pardons that were obtained.

they were still harassed by visitations of their former disease. It exhibited itself, however, under none of those frightful forms which have been before described. With the exception of two or three cases of fever, which were formidable, rather on account of their protracted duration than their severity, there were none which occasioned us any apprehension. The present form of disease was diarrhœa almost universally; and it nearly resembled that which we had witnessed upon our first visiting the Penitentiary, in the month of March. It was then controlled by chalk mixture and opium, and the same remedies, or remedies of which opium was the main ingredient, had now a beneficial influence. But if the disease, even now, went beyond a certain degree, it was in vain to attempt its abatement by any medicine but mercury; a fact, to which the physicians lately called in, bore equal testimony with Dr. Roget and myself.

Upon a comparison, during the month of September, of the prisoners, male and female, still remaining at Millbank, with those

at Woolwich, and at the Regent's Park, the balance of health was greatly in favour of the latter; yet their condition, five or six weeks ago, was so much the worse, as to obtain for them the preference of being the first selected for removal. The benefit, therefore, of change of air, and change of place, was unquestionable.

On the 20th of September, we were able to report formally to the committee, that "the habit of all the prisoners, both at Woolwich and the Regent's Park, is strikingly improved, and the majority have recovered the appearance of robust health. In this number many are included, whose lives had been brought into hazard by successive attacks of the disease in its several forms, and who, at the time of their removal, were in a state of great debility. The disease itself, we have the satisfaction to state, has assumed a much milder character, but even yet it is extensively prevalent; and it is remarkable, that many whose general health seems *entirely* re-established, still experience,

from time to time, the recurrence of their former disorder in a mitigated form.”

Another month elapsed, and the prisoners at Millbank, although they were suffering no formidable disease, still experienced some insurmountable impediment to the recovery of their health. Their condition at this time, and the condition of the men on board the *Ethalion*, and of the women at the Ophthalmic hospital, respectively, may be learnt from the following questions and answers:—

LETTER from G. R. Dawson, Esq., containing certain questions to be answered by the Physicians, by direction of the Secretary of State.

WHITEHALL, 21ST OCTOBER, 1823.

SIR,

In reference to your letter of the 18th October, I am directed by Mr. Secretary Peel to request, that you will call upon the physicians in attendance upon the sick belonging to the Penitentiary, for a detailed report upon the several points following:—

1st. The state of the disease at present existing in the Penitentiary, as compared, in point of malignity and extent, with its state at former periods.

2d. What has been the general result of the experiment made in August, and at subsequent periods, of transferring

a portion of the male prisoners from the Penitentiary to the Ethalion hulk.

3d. The same question, with respect to the transfer of females to the Ophthalmic hospital in the Regent's Park.

4th. Is there reason to believe that the transfer of the male prisoners now in the Penitentiary to another hulk to be prepared for their reception, would be an advantageous measure to the prisoners themselves, as conducive to the recovery of the sick, and preventing the risk of disease in the case of those who have hitherto suffered.

5th. The same question as to the removal of female prisoners now in the Penitentiary, to some place of reception like that in the Regent's Park.

6th. Could the whole of the female prisoners, now in the Penitentiary, be safely removed to a hulk at this period of the year; or could any portion of them, those for instance who have not suffered, or very slightly suffered from the disorder.

I am, Sir, your most obedient servant,

(Signed) GEO. R. DAWSON.

The Chairman of the Superintending Com- }
mittee of the General Penitentiary. }

ANSWERS by the Physicians to the questions contained in Mr. Dawson's Letter of the 21st October, 1823.

OCTOBER 23d, 1823.

1st. At former periods there was in the Penitentiary every gradation of complaint from the severest dysentery to the mildest diarrhœa; and the most formidable, or the

dysenteric cases, were greatly predominant. At present, with a few exceptions, there is no disease beyond a diarrhoea, and the milder cases predominate. The malignity of the disease is therefore greatly abated. With respect to the extent of the complaint, if it be estimated from the number ill at the present moment, it is greatly diminished; but all in the Penitentiary, who have once had the complaint, are continually suffering short relapses.

2d. The result of this experiment has been highly satisfactory. The prisoners transferred to the Ethalion hulk have gained a greater degree of health, and have suffered fewer relapses than those in any other situation.

3d. The female prisoners now in the hospital in the Regent's Park, and who had been originally selected as being those who were suffering the most from the prevailing disease and its effects, have since their removal, notwithstanding they have experienced frequent relapses, on the whole, gained ground considerably. Comparing the general improvement that has taken place in their health, with the progress made by the females who have remained in the Penitentiary, we think ourselves warranted in concluding that they have derived considerable benefit from their having been transferred to the Ophthalmic hospital. It is certain, however, that they have benefitted much less than the men on board the hulk.

4th. We think such a transfer of the male prisoners now in the Penitentiary to another hulk, would be a measure advantageous for the purposes contemplated.

5th. We think that such a removal would unquestionably be desirable.

6th. Although the period of the year be unfavourable, still we should consider that the removal of all the female

prisoners to a hulk, if it could be soon effected, would, upon the whole, be an advisable measure.

(Signed)

M. P. LATHAM.

P. M. ROGET.

CLEM. HUE.

H. H. SOUTHEY*.

Upon this representation, it was determined to transfer all the prisoners, male and female, remaining at Millbank, to hulks fitted for their reception at Woolwich. Accordingly, on the 14th of November, the women, whose number was now reduced by pardons to eighty, were removed on board the *Narcissus*, and between the 8th and 10th of December, the men, reduced to 281, were put on board the *Dromedary*.

At length the Penitentiary at Millbank was empty, and all the prisoners were divided between the hulks at Woolwich, and the Ophthalmic hospital in the Regent's Park.

Now, considering what had been the condition of the prisoners at Woolwich, and of those at the Regent's Park, since their re-

* Dr. Macmichael's absence from London at this period prevented him from joining in these answers.

removal from Millbank, and comparing the present state of both, we had much more reason to be satisfied with the result of the experiment in regard to the former than the latter. Immediately after their removal, both alike seemed to throw off the remaining symptoms of their disease, and to put on the appearance of returning health; yet both afterwards continued alike to suffer an occasional recurrence of their disease, chiefly in the form of diarrhœa. There was, however, this manifest difference between the two, that while those on board the hulks at Woolwich, continued to recover their general health, in spite of frequent occasional attacks of diarrhœa, the females at the Regent's Park did not, in respect of their general health, go on to improve during more than the few first weeks after their removal. Moreover, among the prisoners on board the hulks, during a period of between four and five months, there had not occurred a single case of formidable disease; whereas, among those at the Regent's Park, during the same period, there had been several. At the end of November, several women at the Regent's

Park, were seized nearly at the same time with that insidious form of phrenitis which, five months before, had been a great cause of alarm at the Penitentiary, and had, in some instances, proved fatal. Dr. Roget, to whose care the hospital in the Regent's Park was especially assigned, found himself compelled to resort to the same remedy by which these symptoms were formerly brought under control, and with the same success.

Under these circumstances, and moreover because the females recently removed to Woolwich from the Penitentiary, had experienced a striking improvement, it was thought desirable that all who now remained at the Regent's Park, and were reduced from 120 to 91, should (if possible) be transferred to Woolwich; and accordingly, on the 21st and 23d of January, 1824, they were put on board the *Heroine*, which had been prepared for them.

All the prisoners belonging to the General Penitentiary were now on board hulks at Woolwich. They were 635 in number,

namely, 468 males, on board the *Ethalion* and *Dromedary*, and 167 females, on board the *Narcissus* and the *Heroine*.

When we first visited the Penitentiary, in the month of March, the total number of prisoners was 858, of whom 531 were males, and 327 were females. Of the 531 males 50 had been set at liberty, by the expiration of their terms of confinement, and by pardons, and 13 had died; and of the 327 females, 143 had been set at liberty, and 17 had died.

The immediate superintendence and treatment of the prisoners, after their removal to Woolwich, were consigned to medical men resident on the spot. Mr. Bayles had the care of the men, and Mr. Pratt, the apothecary of the Penitentiary, had apartments on board the *Narcissus*, and took charge of the women. The physicians, however, continued still to visit all the Penitentiary hulks at intervals; and some circumstances, which thus fell under my observation, require to be mentioned.

One remarkable circumstance was, that the prisoners in the several hulks, although transferred at various times, and at different seasons of the year, all experienced a striking change for the better, almost immediately upon their arrival at Woolwich, and that their disorder ceased for a time. This happened equally to the men put on board the *Ethalion* in August, and the *Dromedary* in December, and to the women put on board the *Narcissus* in November. When they had been on board ten days, we found scarcely any complaint among them.

This speedy amendment, which uniformly followed change of air and change of place, held out at first a most encouraging prospect. But in every instance it was fallacious; for, after a temporary pause, the disorder returned in the form of diarrhœa. It was mild in its symptoms, but still it was evidently the same which had prevailed at Millbank.

Another remarkable circumstance was,

that neither the total absence of the disorder, during a considerable period, nor the complete re-establishment, in the mean time, of the general health, furnished any security against its recurrence. The men on board the *Ethalion* were under our observation during three-quarters of a year, after their removal, and among them there were many, who, having been free from all symptoms of complaint during two, three, four, and even five months, and having in the mean time recovered robust health, again suffered diarrhœa.

This liability of all the prisoners to suffer the recurrence of their disorder, in spite of the re-establishment of their general health, and of their complete immunity from it for a season, rendered their condition very fluctuating. It was impossible to anticipate what would be their condition from one week to another. At our visits to Woolwich, we were accustomed to see each individual prisoner, and to question him respecting his health; and thus, when at one visit we had found, among 200 men, not more than five

and twenty with complaints of the bowels, at the next visit we found half of the whole number affected with diarrhœa.

These sudden transitions we were at first ready to impute to sensible changes in the state of the atmosphere, but soon we could discover nothing to which they could be reasonably ascribed. It seemed as if, in all who had once suffered, there still remained some morbid condition of the bowels, the relics of former disease, which required time, and the choice of all the most favourable circumstances, to effect its reparation. This condition, however, appeared compatible with the re-establishment of the general health, and compatible even with the natural functions of the bowels themselves, holding them nevertheless in a perpetual proneness to disorder, from occasional causes, until reparation was complete.

In the description of the disease, as it prevailed when all the prisoners were at Millbank, some account was given of the morbid

appearances found in the bodies of those who died. From this it may be collected, what was the actual condition of the parts upon which the stress of the disease fell, when it declared itself in symptoms referable especially to the bowels, or to the brain and nervous system, or when it appeared under the more general character of fever.

And now, having described the same disease recurring in one of its forms, that of diarrhœa, among the prisoners after their removal, and still continuing to recur during many months, and under every variety of circumstances, and even after the complete re-establishment of their general health, I shall be expected, perhaps, to state what was the actual condition of the intestines in those who were the subjects of such attacks. I possess, however, no certain information upon this point; for the only means of obtaining it would have been by dissection at the time; but these, fortunately, were wanting, since the attacks did not prove fatal in a single instance. Several dissections, how-

ever, performed at other times, and with different views, seemed to me to throw some light collaterally upon the question.

In those who died at Millbank, after symptoms immediately referable to the head, having formerly suffered disorder of the bowels, but having been a long time free from it, we found ulcers of the intestines. The intestines were otherwise exempt from disease. The ulcers were few in number, not more than three or four throughout the whole tract of the bowels. They were of very small extent, and in progress towards reparation.

A young man, who had originally suffered the bowel complaint very severely, at Millbank, and whose life had been rescued by the treatment adopted there, and who subsequently at Woolwich, in spite of the re-establishment of his general health, had frequent returns of diarrhœa, was ultimately pardoned and set at liberty. A short time afterwards he presented himself to me among the patients applying for admission into the

Middlesex Hospital. He was a miserable object, worn down and emaciated by impoverished diet, and the hardships he had suffered since his liberation. His present complaint was diarrhœa, with severe pain in the head. The diarrhœa was soon arrested; but the disorder of the head assumed the form of that insidious phrenitis already described, and he died. Upon dissection, there was found inflammation of the membranes of the brain, and fluid effused between them and into the ventricles. In the intestines, after careful examination, nothing was found but three minute spots, exhibiting the appearance already described, of ulcers in the process of reparation.

A young woman, who had suffered the bowel complaint, at Millbank, with several slight relapses, died in the course of the last summer, at the Westminster Hospital, of pulmonary consumption. Upon dissection, besides the disease of the lungs, healing ulcers were found in the intestines. They were very circumscribed in their situation, and entirely free from surrounding inflammation.

It is not unreasonable to conjecture, that the same condition of the bowels, which was found in these cases, existed also in those who suffered the frequent recurrence of diarrhœa at the hulks. A few minute ulcers, somewhere in the tract of the intestines, tardily undergoing the process of reparation, and without any surrounding inflammation, constitute just that sort of morbid condition which is calculated to produce such a disorder. Being very circumscribed in extent, and free from inflammation, they would be capable of existing without constant injury to the general health, and even without constant impediment to the functions of the parts to which they belonged; yet, from the natural irritability of those parts, they would still be liable to produce temporary disorders, under the influence of occasional causes; and such disorders would continue apt to recur, until the process of their tardy reparation was complete.

But however reasonable, and however true this conjecture might be, we were not yet acquainted with all the facts just mentioned,

upon which it is grounded. So that, during the actual prevalence of the disorder at the hulks, our method of treating it was determined by the best view we were enabled to take of its general character, in the absence of information derived from dissections. And that view, which has been already stated, led us to suggest the propriety of employing such remedies only as were found to have the effect of checking the symptoms as they arose, and the propriety of abstaining from the use of mercury, and of being content to leave that to time which time alone could repair. Opiates and aromatics had the palliative effect which was desired, and they were accordingly employed.

Where, however, more disorder of the bowels arose (as it did in a few instances) than could be supposed to proceed merely from the relics of former disease, and these remedies had no influence in checking it, then others were resorted to from necessity, and all others were still in vain except mercury.

Such a disorder arose on board the *Narcissus*; and the symptoms seemed to bespeak a morbid action of an acute kind, set up afresh, or ingrafted upon the old. The women on board the *Narcissus* had, since their arrival at Woolwich, in November, rapidly recovered their general health, and had been strikingly exempt from their former complaints, when, in the month of March, there were found among them numerous instances of disorder, expressly referable to the stomach. It was of a severe and formidable kind, and did not strictly resemble any of those forms of disorder which have been described. There was a sense of sinking, with extreme pain over the whole epigastric region, great impatience of pressure, and enormous distention of the abdomen, violent retching, with the rejection, in several cases, of pure florid blood. The blood was generally small in quantity, but, in a few instances, it amounted to more than a pint. The pulse was feeble. Neither food nor medicine would remain upon the stomach; both were rejected, with extreme aggravation of all the symptoms.

The disorder had already existed during several days, and various methods of treatment had been employed, when Dr. Roget and myself were sent for to Woolwich. We found ten women at least in a state of peril. The remedies used had produced no abatement of the symptoms, which were daily becoming worse in every case. Mercury had not been of the number, the apothecary conceiving that he acted in conformity with our wishes, when he scrupulously withheld it.

Now, although the order of symptoms which we now witnessed, was not precisely identical with any we had formerly seen at the Penitentiary, yet it was impossible not to regard them as partaking of the same nature; and surely, upon the failure of every other remedy, we were not justified in withholding that, which had already rescued life under various circumstances of peril belonging to kindred diseases. Accordingly, we resorted to calomel and opium. Five grains of calomel and one grain of opium were first administered to several patients; but there followed, to our disappointment, an aggrava-

tion of all the symptoms. The retching, and vomiting, and spasmodic pain were prolonged through the night. Yet it was not the remedy itself, but the largeness of the dose, that produced the disagreement; for when one grain, or two grains of calomel, and a fourth, or half of a grain of opium, were given every second, or every third hour, they were retained, and the stomach was tranquillized, and there followed a gradual abatement of the symptoms. Still all the symptoms, and especially the pain, were not finally removed, until the gums were perceptibly sore.

This affection of the stomach was different from that already described as the concomitant of fever. It did not tend to a critical termination, and its relief, although it was procured by the same remedy, was brought about in a different way; not by its producing a discharge of morbid secretions, but (as far as we could judge) by its specific influence upon the constitution.

But what was the precise condition of the

parts to which the symptoms were expressly referred in these cases? Fortunately, we had not the opportunity afforded us of determining, by dissection, what it was. But whatever it might be, undoubtedly it was such as constituted an acute disease, tending to the destruction of the individual, if its course had not been arrested. From the symptoms, and from the method of treatment which procured their relief, and from our general experience of what morbid anatomy has disclosed, under circumstances nearly the same, perhaps we should not be far wrong in concluding, that the seat of the disease was the blood-vessels of the stomach, or of the upper part of the intestinal canal, and that their sudden and undue repletion was the condition which constituted the disease itself.

In the course of ten days, this form of disease, which has been described, attacked nearly half the women on board the *Narcissus* in succession, and there was a continual apprehension that it would prove fatal to some. In the mean time, almost all on board

the same vessel, who were not afflicted after this manner, suffered either some form of bowel complaint, or some affection of the brain or nervous system, such as formerly prevailed at Millbank. Thus there was hardly an individual who escaped an attack of severe illness, but none died.

It was melancholy to remark, when their severer sufferings had terminated, the sad contrast which the condition of these poor women now bore to what it had been a month ago. It was not a long time since the *Narcissus* was so conspicuously healthy, that it furnished an argument for the removal of the women from the Regent's Park to Woolwich. But now, from the relapse of former symptoms, and the accession of new ones; from the relics of old disease, and from disease, either set up afresh, or ingrafted upon the old, a state of apparent health had, in the space of a month, given place to emaciation and weakness, and to that peculiar look of distress and exhaustion which belongs to those who have just, with difficulty, surmounted an acute disease.

There was no one peculiar cause to which these late attacks could be confidently ascribed. Yet there were many causes inseparable from their condition as prisoners, from which they might possibly come. Therefore, as long as they remained in that condition, there was no security against the return of the same or similar forms of disease. And in such an event, if it soon occurred, there was every probability that many would perish; for the same individuals had not strength enough remaining to support it.

At the same time, the women brought from the Regent's Park, and put on board the *Heroine*, at the end of January, had not found that immediate benefit, which all the other prisoners experienced, upon their removal. Moreover, many severe cases of relapsed bowel complaints had occurred among them since their arrival at Woolwich.

Deplorable, indeed, was the condition of all these wretched women, both on board the

Narcissus and the Heroine, in respect of their bodily sufferings, but more deplorable still (if possible) in respect of their mental misery. It was painful to witness the manner in which they all abandoned themselves to despair, and those especially who had still before them the prospect of a long captivity. Every day brought some fresh proof how great was the influence of mental distress in augmenting bodily pain and sickness. Whatever circumstances were calculated to make a strong impression upon the spirits, threw them back at once, from a state of convalescence, into absolute disease. I will mention one such circumstance, as an example.

Upon the recommendation of the committee, individuals were pardoned, from time to time, for good conduct. Recently, claims for such recommendation had been more easily admitted, and consequently pardons had become very numerous. Hence the prisoners themselves naturally began to think that the claims of all were nearly equal, and every one pleased herself with believing, that she should be the next who would be

set at liberty. Whenever, therefore, an individual was pardoned, all the rest were thrown into an agony of the bitterest disappointment, and were, at the same time, overtaken by disease. It was not a mere nervous or hysterical ailment, but some actual form of real disease, such as they had before suffered, and requiring the strictest medical treatment for its relief.

Now it was evident that every measure had been resorted to for their benefit, which was compatible with the condition of prisoners. But there was reason to believe, that causes inseparable from that condition still prevented their recovery. As to those who had been set at liberty, it can hardly be expected, that much accurate information could be obtained concerning them, after they left the prison. Several, however, had presented themselves at the Penitentiary since their enlargement, and it appeared certain, that they had enjoyed more uninterrupted health, and a longer exemption from disease, than those who had remained in confinement. Several, also, who had been par-

done, upon the representation of the physicians, that their enlargement afforded the only probable means of saving their lives, had, after the lapse of a few weeks, appeared in perfect health.

With such facts before us, it became a question whether the same representation, which had at different times been made in favour of a few, ought not now to be extended to all. After witnessing the nature of the late severe attacks, the numbers they involved, and the consequences they left behind, it did appear to us, that the only measure which remained was to set at liberty all the female prisoners, without exception, for the sake of preserving their lives. The course of their sufferings, during more than twelve months, might be thought justly equivalent to many years' imprisonment; at least, the humanity of Mr. Secretary Peel led him to adopt this opinion, and to admit the one in compensation for the other, when he recommended them all to the mercy of the Crown for pardon.

Some delay, however, was requisite, before this act of grace could be carried into execution. It was easy to set these poor women at liberty, but care was to be taken, that, being set at liberty, they were not left destitute. As soon, therefore, as Mr. Peel made known his intention, the committee undertook the laborious duty of corresponding with the friends of the prisoners in every part of the kingdom. Thus each was pardoned, as it was ascertained that they had friends willing to receive them, until, finally, they were all pardoned. The last left the Penitentiary hulks on the 18th of June, 1824; and the committee had the satisfaction of knowing, that there was not one who had not a place of protection to go to immediately upon her dismissal.

Of the men, two died consumptive, one in October, the other in January; otherwise no formidable disease arose among them after their removal to Woolwich.

They were still liable to occasional attacks

of diarrhœa, but it was probable that every individual who thus continued to suffer, only required to be put under circumstances a little more favourable to health, to secure his complete recovery. Although they were on board hulks, they were still Penitentiary prisoners, and, unfortunately, not amenable to hulk discipline. They could not, therefore, be taken on shore to work, but were necessarily allowed to remain in perfect idleness on ship-board—a state which had already led to alarming acts of tumult and violence. What, then, was to be done? There were serious objections to letting 400 men, who had been guilty of felonious acts, at once loose upon the public. Yet it was impossible they should continue where they were. It was determined, therefore, to transfer all the male prisoners to the hulk establishment; and, accordingly, an act of parliament was obtained, on the 12th of April, 1824, to give Government the power of doing so. We hoped that, by being distributed among the various hulks, and subjected to active occupations, under their new discipline, they would be placed in a condi-

tion more favourable to the recovery of their health. Some were sent to Sheerness, and some to Chatham, and some remained at Woolwich, being transferred to the hulk establishment there.

The gentlemen who have the medical superintendence of the hulks, in these several situations, have favoured me with answers to inquiries, which I lately took the liberty of addressing to them, respecting the health of the Penitentiary prisoners under their charge. These are all of the most satisfactory kind. Mr. Bayles, of Woolwich, writes, on the 1st of November last, "that from the time the Penitentiary prisoners were incorporated with the other convicts, they have worked on shore at whatever kind of labour they were ordered to, and have continued in good health." Mr. Hope, of Chatham, on the 19th November, writes, "that the convicts from the Penitentiary were mingled and employed with the other labourers, and that he has not had complaints made to him by them more frequently than by those received from other places." Mr. Robertson,

of Sheerness, on the 19th of November, informs me, that only three or four boys came from the Penitentiary to the hulk under his superintendence, none of whom had ever been under his care for illness." And Mr. Cullen, of Sheerness, on the 30th of November, says, "that the general state of health of the prisoners, lately received from the Penitentiary, did not appear to be different from that of the others, who all enjoy a tolerable share of good health, considering all circumstances."

In this manner were the prisoners of the Penitentiary all finally disposed of. It would be interesting to know the present state of many, and especially of the women, who were set at liberty from a conviction on our part, that their condition as prisoners presented some insurmountable obstacle to their perfect recovery. But such information could not now be easily obtained. A few, whom Dr. Roget and myself have casually met, had the appearance of health, but were not exempt from occasional attacks of diarrhœa.

CHAPTER IX.

ORIGIN OF THE DISEASE.

THE same course which I followed in my description of the disease prevalent at the General Penitentiary, I shall still pursue in my inquiry concerning its probable origin, stating the circumstances connected with the question, according to the order in which they presented themselves to my own observation.

Dr. Roget and myself, having observed the disease of the Penitentiary during a month, and having witnessed its apparent cure by the simplest remedies, and being then unable to trace it back to a period more remote than the preceding autumn, did, in our Report of the 5th of April, 1823, ascribe its origin to the conjoint influence of

an impoverished diet and a severe and protracted winter. We considered, moreover, that there was sufficient evidence of these being its *exclusive* causes; and we had the satisfaction to find, that the opinion of many eminent medical men coincided with our own.

The reasons assigned by us, and adopted by others, as conclusive at the time, are stated at length in the Report.

But the disease returned; and our further observation of its nature, and our subsequent acquaintance with new facts connected with it, convinced us that our first opinion respecting its origin was not tenable in its fullest extent. As to the nature of the disease itself, when we looked back upon its progress during many months, and considered its various forms, its duration, and its intractability by ordinary remedies, we could not help acknowledging it to be contrary to experience, that such a disease should derive itself *exclusively* from the causes to which it had been imputed.

Cold, and scanty nourishment, are among the causes of disease with which medical men are best acquainted. Among the poor of large towns, they are known to be productive of complaints at all times, and in seasons of scarcity, and during winters of long and severe frost, being then applied in their most intense degree, they are even capable of engendering epidemic diseases. But at the Penitentiary, they were certainly not applied in their most intense degree. The winter, indeed, was cold, but the prison afforded a protection against its inclemency. The diet was defective in animal matter, but it was wholesome in its kind. Still the winter being such as it was, and the diet not a nutritious diet, might well be supposed capable of producing some disease, but not a disease which should reign like a pestilence within the prison, and require all the prisoners to be removed for the sake of preserving their lives. They might, in short, be thought capable of producing such a disease as that of the Penitentiary seemed to be in the month of March, but not such as our subsequent experience found it to be.

In the month of March, not only was the disease such as the alleged causes seemed capable of producing, but its history, and all the circumstances connected with it (all, at least, which had then come to our knowledge), apparently excluded every other cause, and pointed directly to these, and to these alone. In its subsequent progress, however, the nature of the disease itself made us first dissatisfied with our original opinion respecting its exclusive causes, and the gradual disclosure of new facts afterwards convinced us that others were actually engaged, both in its production and continuance.

In our Report of the 3d of July, 1823, we intimated to the committee, that there was some cause in operation, over and above those to which we had originally imputed the disease; and that there was a suspicion of contagion, and a suspicion, moreover, of an injurious influence peculiar to the place.

I will state all the facts and circumstances

within my knowledge, which seem to bear upon the two questions, in order that medical men may be able to form their own opinion concerning them, keeping one question distinct from the other.

I will speak first respecting contagion. At the date of our first Report, April 5, 1823, the disease had been found exclusively among the prisoners. Subsequently, however, several officers of the establishment were affected with it, and those especially who were in frequent intercourse with the sick. Twelve male and six female officers suffered the same forms of disease with the prisoners themselves. The chaplain, also, and various individuals of his family, residing within the walls of the Penitentiary, had the disease in the form of bowel complaint, himself (as he believed) in consequence of his attendance upon the sick prisoners, and his family (as he believed) in consequence of a female, selected from among the prisoners to become his servant, being received into his house, before she had entirely recovered

from the disease, which she had suffered in the form of bowel complaint, and a slight scurvy.

Further, prisoners recently admitted into the Penitentiary, and not obnoxious to the influence of the causes to which the disease was originally imputed, were nevertheless not exempt from its attacks. The diet was changed on the 1st of March, and fresh convicts had been received into the Penitentiary during the latter part of February. These certainly were not subjected to the diet then in use for a period sufficiently long to have derived any possible injury from it. The winter, too, was now past, and fresh convicts were still sent to the Penitentiary until the month of June. From the 16th of February to June, 132 prisoners were admitted, namely, 127 males, and five females. Of these 103 suffered the disease, namely, ninety-eight males and five females. There was no difference in the symptoms of their disease to distinguish it from that of those who had been longer in confinement; and, as far as the testimony of one dissection

goes, there was no difference in the internal morbid conditions.

John Lampard, aged 29, was admitted into the Penitentiary on the 25th of March. He had not been there more than three weeks, when he was seized with violent pains in the head. To these fever succeeded. The fever declined into a slow hectic, in the course of which dysentery arose, with evacuations of slime and blood. The dysentery was mitigated, but the fever continued, with delirium. Lastly, abscesses began to form in the neck about the angles of the jaws, and a purulent discharge took place from the ears. Thus he lingered until the 15th of June, when he died.

Upon dissection, there were found vascular patches in various parts of the intestines, ulcers of the large bowel, and here and there spots of ecchymosis. The brain and its membranes appeared free from disease.

These are the facts which led Dr. Roget and myself, in the month of July, to express

our suspicion to the committee, that the disease had become contagious, and to recommend the practical measures which such a suspicion would naturally suggest. These facts were regarded in the same light by the other physicians who were afterwards associated with us; for when, on the 27th of September, this question was formally proposed to us by the committee, "Are the physicians of opinion that the disease is contagious?" we returned the following answer conjointly:—"There are grounds for believing that the disease has become contagious; the evidence may not be of a nature positively to establish the fact; but, practically, we feel it imperative upon us to act upon the presumption that it is contagious."

After the removal of the prisoners to Woolwich and the Regent's Park, certain circumstances occurred which seemed still further to establish the prevalence of contagion; and the physicians (I fear) were thought rather perverse in not considering them quite so conclusive of the question, as they were regarded by others.

First, Three persons employed at the Ophthalmic Hospital, who had not been at Millbank, suffered disorder of the bowels, under one of the forms in which it had prevailed among the prisoners, that of cholera morbus. But it was at a time of the year when cholera morbus was every where a frequent complaint. These three cases, therefore, could not be allowed to contribute much weight towards the proof of contagion.

Secondly, The female prisoners on board the *Narcissus* had been convalescent during several weeks; when the females from the Regent's Park, of whom several had recently suffered renewed attacks of their disorder, were removed to Woolwich, and put on board the *Heroine*. Both vessels were moored close to each other, and some women from the *Heroine*, for the sake of better accommodation, were transferred to the *Narcissus*. Not many days afterwards, there was a general complaint of illness on board the latter vessel, which terminated in that form of disease, which has been described, occurring in the month of March;

and thence it was concluded that the disease was communicated by the prisoners of the Heroine to the prisoners of the Narcissus, and that another proof was obtained of its contagious nature.

Now, if this were the fact, the disease was not only contagious, but contagious in a manner peculiar to itself. For it has never been shewn (as far as I am informed), that the convalescents from any disease are capable of re-infection by those who are the more recent subjects of it.

I am not disposed, therefore, to believe that the prisoners of the Narcissus, in this instance of their sudden disorder, were re-infected by those of the Heroine, because the fact itself would be contrary to general experience. And further, I am not disposed to believe it, because transitions from a state of convalescence to a state of disorder, had been just as sudden among the men on board the Dromedary and the Ethalion, when there was no possibility that it could have been

derived from contagion, unless you suppose the same people capable of receiving and communicating the same complaint, from and to each other, indefinitely.

Thirdly, When the women were put on board the *Narcissus*, a waterman was kept in constant employment communicating between the vessel and the shore. This man had a severe attack of dysentery.

If there had been many instances of this kind; if it had been notorious that, of the many individuals who in fact went on board the Penitentiary hulks, such as friends, workmen, &c., several had suffered the same symptoms with the prisoners themselves, then there would have been evidence enough that the disease was contagious after the removal from Millbank. But this was not the case, and the single instance of the waterman, surely, cannot justify this conclusion. Upon the whole, then, no other circumstances can be fairly admitted in proof of the contagious nature of the disease, but

those which occurred within the Penitentiary itself. Why the evidence which they furnish "was not of a nature positively to establish the fact," will plainly appear, when we have considered the question of an injurious influence peculiar to the place.

I proceed next to state the facts and circumstances within my own knowledge, which bear upon the question of a noxious influence peculiar to the place. The following Report, presented to the committee of the General Penitentiary, on the 11th of October, 1823, contains some of the most important. But before it is given, I think it necessary to state, concerning the day-books which are there mentioned, and to which frequent allusion will be made in the discussion of the present question, that we had no knowledge whatever of their existence, until they were voluntarily produced by the apothecary himself, a few weeks before the date of the Report. The apothecary either forgot that he had them in his possession, or he did not think them capable of furnishing so much

important information, and therefore did not mention their existence:—

TO THE COMMITTEE OF THE GENERAL PENITENTIARY.

11th October, 1823.

GENTLEMEN,

THE severity of the disease prevalent at the Penitentiary having greatly abated within the last few weeks, we have had more time to turn our attention from the immediate care of the sick, and to make further inquiry into the origin and progress of the epidemic. We beg to lay before the committee all the details of our investigations.

We have perused all the written communications of the medical officers to the committee, from June, 1820, when such communications were first regularly made, down to the present time.

These communications consist of Reports made quarterly by the medical superintendent and the apothecary; of Reports made monthly by the apothecary; and of numerous special Reports made by one or other, or by both of them, at various times and at uncertain intervals.

The quarterly and monthly Reports contain observations upon the state of health of all the prisoners in the Penitentiary; the condition of those in the prison at large, ascertained at their general inspection, as well as the condition of the sick in the infirmaries, who were under constant observation and care.

The special Reports consist of returns made by the medical officers, of all deaths that occurred, of notices of the diseases that proved fatal, also of answers to inquiries re-

specting the health of individual prisoners; and they contain, moreover, various requests, suggestions, and observations, relating to circumstances connected with their department.

In these communications we find the healthy state of the Penitentiary announced after a general inspection in June, 1820, and constantly and uniformly confirmed after every quarterly and monthly general inspection, down to the commencement of the present year; we find its exemption from disease again and again insisted upon, as something striking and peculiar; and we also find comparisons drawn between the health of those in common life and the health of the prisoners in the Penitentiary, and conclusions deduced to the advantage of the latter.

Nevertheless, diseases did occur from time to time in the Penitentiary; but we discover in these communications no opinion expressed by the medical officers, that any one disease was predominant, or any one disease of a peculiar character.

Throughout these communications, the only notices of disease resembling that which has lately prevailed in the Penitentiary, are the following:—

In a Report after a general inspection, dated October 2d, 1820, among forty-seven cases of various diseases then in the infirmary, five cases of diarrhœa are mentioned without further comment. No trace of this disease is afterwards found, until a Report, after a general inspection, dated November 2d, 1821, a single case of diarrhœa is mentioned, which proved fatal, but without comment. Again, no trace of this disease is met with, until in a Report, after a general inspection, dated January 6th, 1822, one dangerous case of dysentery is mentioned; and again,

in a Report, after a general inspection, dated February 2d, 1822, one fatal case of diarrhœa. Here the dangerous case of dysentery in one month, and the fatal case of diarrhœa succeeding, refer to the same individual.

No allusion to the disease is afterwards made, until in a Report, after a general inspection, dated June 4, 1822, two fatal cases of diarrhœa are mentioned; and among the dangerous cases then in the infirmary, one of diarrhœa is noticed, which, in a special Report made the next day, is said to have proved fatal.

Afterwards, in a Report after a general inspection, dated July 1st, 1822, one dangerous case of diarrhœa is mentioned, which terminated fatally, as we learn from a special Report on the following day. From July, 1822, to January, 1823, there is no allusion made to a single case of diarrhœa, when in a Report, dated the 10th of the latter month, "a few more cases of diarrhœa" are spoken of; in the following month, *viz.* February, scurvy and flux are said to be gaining ground, and in the beginning of March, these two diseases pervaded the whole prison.

Thus, in these authentic records of the health of the Penitentiary, regularly drawn up by the medical officers, and regularly presented to the committee for their information, we can only find, during the period of two years and eight months which immediately preceded the declared existence of the epidemic, eleven cases of any diseases at all similar to that epidemic, in its character and symptoms. Of these eleven cases, six proved fatal.

From these fatal cases, however, occurring as they did at periods remote from each other, or indeed from all of them, mentioned as they were at the time of their occur-

rence, without any special comment by the medical men who observed and treated them, we should not now be justified in drawing any inference. As far, then, as any information can be obtained from these documents, we should still attribute this disease which has prevailed in the Penitentiary, entirely and exclusively to the influence of diet, and to a severe and protracted winter.

But we have thought it our duty to have recourse to other documents, and we have extracted from them facts of unquestionable importance, which were hitherto unsuspected by the medical men who have watched the course of all the diseases that have occurred in the Penitentiary since its first establishment.

We have examined the apothecary's day-book, and every paper upon which any record has been preserved, of medicines ordered for the sick, from the year 1816 to the present time, including every prescription for the severer ailments of those in the infirmary, and for the complaints of those who were still well enough to pursue their ordinary occupations in the prison. We have also examined the bills of charges for different kinds of medicines that have been furnished to the Penitentiary within the same period.

By the help of these documents, and inferring, as far as we could with safety, the nature of diseases from the medicines that have been procured, and the kind of remedies prescribed for individual cases, we have endeavoured to form the most reasonable conjecture, whether any, and what disease has been predominant in the Penitentiary before the last twelvemonth; and if any, whether it has been at all similar to the epidemic that has recently prevailed there.

The following Table gives the number of prisoners in the Penitentiary every year since the year 1816, with the number of cases treated as diarrhoea in every year:—

	*1816.	1817.	1818.	1819.	1820.	1821.	1822.
Prisoners -	72	212	246	351	609	798	866
Cases of diarrhoea	23	104	106	82	85	87	88

We are aware that inferences concerning the nature of a disease deduced from the remedies employed for its cure would, in general, be hasty and inconclusive. But as in the present case, the nature of the disease is unequivocally indicated by the particular remedies used, we may, with certainty, conclude that diarrhoea has existed in the Penitentiary from its first establishment, and that it has prevailed in various degrees of extent at different periods; that, proportionably to the number of prisoners, it prevailed to the greatest degree during the year immediately after its establishment, and that it has prevailed in a less and less degree each succeeding year, down to the period when the present epidemic was discovered.

From the same documents we discover certain peculiarities belonging to this disorder, peculiarities which become more and more remarkable in each succeeding year (even although the numbers decrease), evidently distinguishing it from the disorder of the same name, which proceeds from common and accidental causes.

* The numbers in this year refer to a period of six months only.

Common diarrhoea is easily curable, and by the simplest means; and in constitutions otherwise healthy, we are not aware that it is at all liable to recur habitually.

But this disorder (we find) did not readily yield to the methods of treatment employed. These records show how pertinacious and intractable it was in many whom it attacked. The same prisoners were again and again brought under medical treatment for it in the same year. Many of the patients of one year are found to have been the patients of the preceding year, and as the period becomes more and more remote from the first establishment of the Penitentiary, we find prisoners still suffering diarrhoea, who had already endured it one, two, three, or four years.

The following Table gives the gross number of cases treated as diarrhoea in every year, and also the number of cases continued from preceding years to the succeeding, the latter being included in the gross amount. It furnishes also the number of new cases in every year, by subtracting from the gross amount of each year the cases continued from preceding years:—

—	1817.	1818.	1819.	1820.	1821.	1822.
Gross number of cases of diarrhoea in each year }	104	106	82	85	87	88
Number continued from preceding year - - }	11	32	31	23	20	17
Number of new cases in each year - - - }	93	74	51	62	67	71

The following Tables show how far back each case of

diarrhoea that was continued from one year to another can be traced:—

In 1817: of 104 cases, 11 are traced back to	- - 1816
In 1818: of 106 — 32 - — -	26 to 1817 6 - 1817 & 1816
In 1819: of 82 — 31 - — -	18 - 1818 13 - 1818 & 1817
In 1820: of 85 — 23 - — -	12 - 1819 6 - 1819 & 1818 4 - 1819 & 1818 & 1817 1 - 1817 & 1816
In 1821: of 87 — 20 - — -	7 - 1820 4 - 1820 & 1819 5 - 1820 & 1819 & 1818 1 - 1819 & 1818 1 - 1818 1 - 1818 & 1817 1 - 1817 & 1816
In 1822: of 88 — 17 - — -	8 - 1821 4 - 1821 & 1820 2 - 1821 & 1820 & 1819 2 - 1820 1 - 1821 & 1820 & 1819 & 1818.

Upon the whole, we think that the facts adduced, warrant us in concluding,—

That a disorder of the bowels, of a peculiar nature, at all times difficult of cure, and of the same general character with that which has constituted the late epidemic, has prevailed in the Penitentiary ever since its establishment; but that until the commencement of the present year it became gradually more and more limited in its extent,

and that although it has been always difficult of cure, it has not upon the whole been attended with much hazard to life, until the breaking out of the late epidemic.

Such are the details of our investigations, the facts they have disclosed, and such the conclusions to which they have conducted us; but as the existence of any local influence productive of disease can only be presumed from certain effects, it is also only from these same effects that the degree and sphere of its activity can be estimated. Whatever noxious influence peculiar to the Penitentiary may be suspected to exist, this influence must have abated of its activity in proportion as the disease became more limited; that is, as the period was more remote from the first establishment of the prison. It was, therefore, (as every thing seems to testify) when this disorder was reduced within narrower limits than at any former period, that suddenly the same disorder became much more extensively prevalent than it had ever been, that it assumed the form of an epidemic, and went far beyond its former character, in the severity of its symptoms, and in its fatal consequences.

Our belief is, that but for the change of diet and the severe and protracted winter, the disease never would have assumed the form of an epidemic. The universal debility produced by these causes, rendered the prisoners more obnoxious to an influence which, as far as we can judge, had become less powerful in itself for the production of disease.

P. M. LATHAM, M. D.

P. M. ROGET, M. D.

(Signed)

CLEM. HUE, M. D.

WM. MACMICHAEL, M. D.

H. H. SOUTHEY, M. D.

This Report, being intended solely for the information of the committee, was restricted to a plain statement of such facts as were deemed capable of being understood, without explanation, by unprofessional persons, and a plain statement of the inference to which they seemed unavoidably to lead. It represents that, from the first establishment of the Penitentiary to the present time, there had been a very large prescription of such remedies as could only have been given for a disorder of the same general character with that which had lately prevailed there; that a disorder of this character must always have existed *there* to require that remedy, and that some cause must always have existed *there* to produce this disorder.

The remedies were designated "mist. cretæ," and "pulv. cretæ." This "mist. cretæ," we understood to be a compound medicine, consisting of chalk mixture, aromatic confection, tincture of columba, and laudanum. The "pulv. cretæ," we understood was the pulv. cretæ comp. c. opio.

Now medical men will acknowledge, that

there is no species of medicine from which the character of any disease can be so certainly inferred, as a flux of the bowels from chalk mixture or chalk powder with opium. From a large prescription of bark, we could not have presumed the existence of ague, nor from the extensive employment of sulphur or of mercury, could we have safely inferred the prevalence of itch, or of syphilis. Bark, and sulphur, and mercury, are continually administered for other complaints besides those, for which they are the reputed specifics. But chalk mixture, with the other ingredients which have been mentioned, could only have been employed for a bowel complaint which had flux for its prominent symptom. If there could be any doubt of the fact in the present instance, it was removed by the testimony of Mr. Pratt himself, who prescribed the remedy, in whose examinations before a committee of the House of Commons, on the 4th of March last, are found this question and answer:—

Question—Do you give the chalk mixture for any disorder but diarrhoea ?

Answer—No !!

We were in possession of other circumstances tending to establish the same conclusions, which might have been introduced into the Report, but which were purposely withheld, because they were of a nature which medical men alone could justly appreciate. At least, they could not have been made intelligible to others without certain explanations, which would have been inconsistent with a simple statement.

These circumstances, however, must now be added, that medical men (whom I consider myself now addressing) may give them the weight to which they are entitled.

Long before the books were brought to light, which furnished the facts upon which the Report is grounded, we were morally convinced (as all physicians must have been) that complaints, which had flux of the bowels for their prominent symptom, had been frequent in the Penitentiary during former years; and this conviction was founded upon certain recorded statements of the apothecary. In the minutes of evidence before a

committee of the House of Commons in the session of 1823, we found that Mr. Pratt, in his examination, had referred to a particular letter of his, written in March, 1822, when a change of diet was contemplated at the Penitentiary. The letter contained a prediction that, in the event of the change contemplated being carried into effect, those disorders, which actually did take place, would be the consequence. This warning was not forgotten when the evil became manifest. Mr. Pratt was acknowledged by all to have predicted truly, and allowed considerable credit. He was himself accustomed to refer us to this prophecy and its verification, not without some exultation; and indeed, well he might; for if, without any help or suggestion from what had already occurred, he really foresaw, not that some disease or other, but expressly the very disease would follow the change of diet, which actually did follow, it is one of the most splendid instances of medical anticipation upon record. Nevertheless we were slow to allow him more than the credit due to a sensible man, rightly conjecturing what

would take place hereafter, from what had heretofore fallen under his own observation. In short, we were quite certain, that the prophecy could have had no other foundation than in the *bonâ fide* experience of the prophet.

But convinced (as we were) of the fact, from the course in which things are accustomed to happen in our own profession, we could not insist upon it until some proof could be obtained, which would be convincing also to others. We continued, therefore, in search of this proof, suppressing still our own persuasion, until we had discovered it.

At length the books in question came to light; and in them it appeared, by the testimony of Mr. Pratt's own hand-writing, that at the very time he was prophesying to the committee, that certain diseases would take place upon their projected change of diet, he had already been prescribing most largely for those very diseases ever since the foundation of the prison, for six years in succession.

Knowing that bowel complaints always had been prevalent in the Penitentiary, he came to the obvious and just conclusion, that they would become still more so, if the diet was rendered less nutritive than it was. Whatever would debilitate must render the prisoners more obnoxious to disease generally, and especially to those complaints to which they had hitherto always been liable.

With us, then, the facts stated in the Report only came in confirmation of a belief which circumstances had already led us to entertain, and which, as physicians, we must still have entertained, whether those facts had been brought to light or not. These circumstances, taken alone, were not calculated (we knew) to conduct others to the same belief. But being added, as they now are, to the facts of the Report, it will be at once seen how much they strengthen its conclusion.

Another circumstance deserves to be mentioned, which gave additional weight to the same conclusion. Before the books in ques-

tion were produced, we had no difficulty in seeing how the apothecary came to foretell the disease of the Penitentiary just as it came to pass. But we had the greatest difficulty in conceiving how he alone should happen to foretell it, and the medical superintendent have no such anticipation. His books, however, soon cleared up this perplexity. For in perusing them we found, that the apothecary alone was *fully* acquainted with the facts upon which the anticipation was grounded, and therefore that he alone could confidently entertain it. The prisoners for whom chalk mixture, &c., was so largely employed were, for the most part, under Mr. Pratt's exclusive care. More than half the number had medicine given to them while they were following their ordinary occupations in the prison. The functions of the medical superintendent and the apothecary were so far divided, that while the daily business of the former was only with the prisoners in the infirmaries, in prescribing for their severer maladies, that of the latter was moreover with the prisoners in the Penitentiary at large, in prescribing for various

ailments which did not require their removal into the infirmaries. Further, the medical superintendent had nothing to do with the prison, except to make a general inspection of it, accompanied by the apothecary, once a month, when it is probable that the numbers taking chalk mixture were not so regularly reported to him, as to make him sensible how constant and extensive the prevalence of diarrhœa had been within its walls.

There remains yet another circumstance to be insisted upon, which bears upon the question of a noxious influence peculiar to the place, and strongly confirms the conclusion of the Report.

From the description of the disease lately prevalent at the Penitentiary, it has been already seen, that an affection of the brain and nervous system formed as much a part of that disease, as did the bowel complaints themselves; that it was co-extensive with the bowel complaints, and consisted, for the most part, of head-ach and vertiginous sen-

sations, which, in many instances, were aggravated into tremors, convulsions, and frenzy.

By help of the apothecary's day-books, we were enabled to shew, that one part of the disease (the bowel complaints) had prevailed extensively in the Penitentiary since its first establishment. We could, moreover, have shewn from the same books, that another part of the disease (the affection of the brain and nervous system) had prevailed there almost co-extensively, and during the same period. This latter fact (I say) was also derived from the day-books; not, however, from the books alone, but from them coupled with the explanatory testimony of the apothecary himself.

We needed nothing but the record before us of the medicines prescribed, to ascertain the prevalence of bowel complaints in the Penitentiary since its foundation; but we were indebted to the *voluntary* suggestion of Mr. Pratt, for enabling us to trace out retrospectively head-ach and vertigo through

every page of his own books. So confident was he, from a knowledge of his own methods of prescribing, that certain remedies there recorded were given by him for head-ach and vertigo, that he undertook to draw up, and actually did draw up, a list of the numbers afflicted with these disorders from the establishment of the Penitentiary to the present time. These numbers were almost as great as of those who suffered the bowel complaints in every year. They were arranged in a tabular form, and were to have made part of the Report presented to the committee. But, upon deliberation, it was thought better not to offer any thing to the committee which was not self-evident, or which stood in need of explanation beyond the mere statement of the fact.

Chalk mixture and tincture of opium could only have been prescribed for a flux of the bowels, and therefore unequivocally denoted the disease. But emetics might have been prescribed for various other complaints besides head-ach and vertigo, and therefore could not be shewn to denote their existence

in the present instance, without further explanation, and without the express testimony of the prescriber himself.

Now, concerning the circumstance last stated, it is too little to say, that it merely confirms the inference of the Report—it does more. If you admit as evidence that only which the books, upon the very face of them, unquestionably prove, you must conclude that a disorder of *the same general character* with the late epidemic has prevailed in the prison since its establishment; and we went no further in our Report. But if, moreover, you admit the explanatory testimony of the apothecary, you must go near to allow, that the disorder which so prevailed there was *identical with* the late epidemic.

I wish to add a few remarks concerning the books in question, as bearing testimony to the existence of *flux alone* within the Penitentiary, and concerning the use we have made of them for that purpose. It was at first our intention to have taken the books themselves to the committee, and to have

turned over the leaves in their presence, pointing out, in one page after another, and frequently in the same page, the abbreviated marks which signified the compound chalk mixture and the compound chalk powder; to have stated that such medicine could only have been given for disorders whose prominent symptom was flux of the bowels, and then to have left the committee to draw their own inference. But it was thought more respectful to present a formal Report, and it was foreseen that such a Report would be required for the information of Government. Accordingly, in endeavouring so to frame it, as to convey the most accurate notion of the extent to which flux of the bowels had prevailed in the Penitentiary, we could conceive no better method than that of the numerical tables which have been given. Nevertheless these mere figures do not convey so much as the books themselves. The *form* of certain entries which appeared there, gave perhaps a more certain assurance that diarrhœa was the predominant complaint of the prison, than any that could have been derived merely from their numbers.

Among frequent entries of medicine delivered to individuals by name, there were occasional entries of chalk mixture, sent by quarts and half gallons, to companies of prisoners working together at their various employments. Thus we find, without any specification of the individuals who were to take the medicine—

In 1816, an entry of	1	quart bottle of mixture for	the kitchen women.
— ditto	1	ditto	Mrs. Clarke's women.
In 1817, ditto	2	ditto	Mrs. Clarke's women.
— ditto	1	ditto	Mrs. Evan's women.
— ditto	2	ditto	the laundry.
— ditto	1	ditto	the carpenters' cell.
In 1818, ditto	1	ditto	Mrs. Croome's women.
— ditto	1	ditto	Mrs. Gould's women.
— ditto	1	ditto	Laban's men.
— ditto	3	ditto	Brett's men.
In 1819, ditto	1	ditto	Mrs. Clarke's women.

Here it is quite evident, that among these several companies, there was a predominant disorder requiring to be treated by one and the same remedy, and that, from the nature of the remedy, the disorder was diarrhœa. It is evident, also, that, in each company, the cases of diarrhœa were so numerous, that

it became needless or impossible to specify the individuals who should take the medicine. The medicine, therefore, was delivered out in large quantities, with general directions (we may presume), that it should be taken by all, or by as many as required it.

These are all the facts and circumstances within my knowledge, which bear upon the two questions of contagion and of a noxious influence peculiar to the place, as causes engaged in the production and continuance of the disease prevalent at the Penitentiary.

Now, to revert to the question of contagion, if its existence and influence be allowed upon the proof of those facts and circumstances which have been mentioned as occurring within the Penitentiary at the time specified, our first opinion concerning the original and exclusive causes of the disease suffers, solely on this account, no necessary contradiction. Those facts and circumstances were of too late a date, to allow a belief that contagion had any share in its

original production. Impoverished diet with cold, might still be the causes which first engendered the disease, while contagion might be a property superadded to it in the course of its progress, and serve to explain whatever has subsequently appeared in its nature and extent, which these causes alone seem inadequate to account for.

This might be deemed a complete theory of the origin and progress of the disease. But the disclosure of new facts demands the admission of another cause, by which the theory is destroyed.

To revert, then, to the question of a noxious influence peculiar to the place, which is the cause I mean, if it be granted upon the proofs adduced, its existence renders a contagious property in the disease extremely doubtful, and, at the same time, manifestly contradicts our opinion concerning its *original and exclusive* causes. For all the imputed effects of contagion admit equally of explanation, upon the presumption of a local injurious influence. And whatever share an

impoverished diet and cold might *ultimately* have in promoting the disease, they could have nothing to do with its origin, since it is traced back to the first establishment of the prison, and found to have prevailed during more than six years prior to that severe winter and that reduction of animal food, to which it has been ascribed.

Finally, then, it may be asked, did an impoverished diet with cold, did contagion, and did a noxious influence peculiar to the place, all bear the relation of causes to the disease of the Penitentiary? And, if so, what was the share which belonged to each in its production and continuance?

That an impoverished diet with cold, and that a local noxious influence really bore this relation to the disease, is established (I conceive) by a train of facts and circumstances, which constitute a moral proof as strong as the nature of the subject will admit. And as to the share which each had in its production and continuance, it is pointed out (I conceive), with great probability of truth, by

the physicians, in their Report of the 11th of October. But with respect to contagion, nothing can be stated with confidence. For we cannot pretend to assign to it its proper share in the production and continuance of the disease, while it yet remains very uncertain whether it had any share at all.

In what has been stated concerning the origin of the Penitentiary disease, my purpose has been rather to furnish medical men with the materials of forming an opinion for themselves, than to assert my own. My own opinion, indeed, I might have entirely suppressed, had it not been the same to which four other physicians were led by a contemplation of the same facts. On this account, certainly, I have myself adopted it with more confidence of its truth.

At the same time I am fully aware of all the difficulties which naturally oppose themselves to the satisfactory solution of such questions as the present; and these difficulties are of a kind which it may not be uninteresting briefly to point out.

Where it is admitted that a disease can be derived from one cause only, its origin is easily assigned whenever it occurs. Where there is small-pox, it must come from contagion. But there is the greatest difficulty, where a disease is capable of being produced by several causes, to point out any single cause, or any two or three causes in combination, which have actually produced it at a particular time.

The disease of the Penitentiary is of this latter kind. It has no one proper and specific cause, but may arise from various causes; from heat or cold, from moist or dry, from almost any kind of injurious influence operating immediately upon the body, or upon the body through the mind; from bad diet, from the influence of situation, and perhaps from contagion; and the difficulty of assigning such a disease expressly to any one or two causes consists in this, that you cannot feel confident in their particular operation until you have the best possible reason for the exclusion of all others which are capable of producing it.

Amidst all these difficulties, then, I may well be asked, whether I really feel assured that the disease of the Penitentiary was (as the Report suggests) derived originally and essentially from something noxious in the situation, and was rendered epidemic by an impoverished diet and a severe winter? and I answer, that I do not pretend to impute it to these causes as punctually and confidently as medical men ascribe small-pox to contagion; for the nature of the thing forbids such absolute certainty; but that, from all the circumstances within my knowledge, I cannot help coming to this as the most probable belief.

I wish to add a few words upon the question of contagion. Whatever may have been the original source of this disease, may not one part of it at least be entirely ascribed to contagion?

The prisoners admitted into the Penitentiary, after the improved diet was adopted and mild weather had returned, were affected with the disease. Of 132 so admitted there

were 103 who suffered. In them was it not entirely derived from contagion?

Assuredly it was in contemplation of these cases that, when the question concerning its contagious nature was put to us by the committee, we answered, that it was practically imperative upon us to act as if it were contagious. By which we meant to say, that the facts already known went to such a suspicion of contagion, as to require us in prudence to act upon it, as if it were an ascertained truth; but that, nevertheless, the facts known did not come up to the best proof that could be had of contagion, and, therefore, we, as physicians, could not be so satisfied of this truth as absolutely to pronounce it contagious.

Contagion is a very obscure thing; and so, too, is the noxious influence of situation. They are not only obscure in themselves, but perpetually obscure the operation of each other in the production of disease. We can never be sure of the operation of contagion, except under circumstances which ex-

clude the operation of local influence. Thus it may take ages to settle the question of contagion respecting a particular disease, because it may not be found under circumstances in which local injurious influence is unquestionably excluded. It is a subject of much controversy, at the present day, whether the yellow fever be contagious or not—and for the reasons to which I allude.

Thus with regard to the disease of the Penitentiary, my colleagues and myself have held the belief of contagion less confidently in proportion as facts have arisen which go nearer to impute an injurious influence to situation.

If I am asked, what would go to the full proof of contagion in the disease of the Penitentiary? I should say nothing less than this; namely, that various prisoners, under the actual symptoms of the disorder, having been set at liberty, various people, with whom they had intercourse in the several situations to which they resorted, had been seized with symptoms precisely the same.

On the 7th of February, 1824, a paper was laid by Mr. Holford before the Managing Committee of the Penitentiary, entitled "Observations on the Medical Report made by the Physicians, dated 11th October, 1823."

It is, in fact, a formal answer to our Report; is written with great deliberation, and contains (I presume) every objection which can be brought against our conclusions.

Now, I feel myself under great difficulty how to deal with this document. If I make no allusion to it, I may be justly blamed for suppressing whatever tends to recommend an opinion different from my own; while, in noticing it (as I am bound to do), I unavoidably incur the hazard of diminishing the value that might otherwise belong to a simple statement, by the introduction of controversial matter.

The document in question was communicated to the physicians at the time it was

laid before the managing committee of the Penitentiary, and we ought (it may be thought) immediately to have presented an answer to it, if any was capable of being given. But we knew (as all medical men must know) how difficult it is to argue upon the subjects of our own profession with unprofessional persons. This was one reason of our silence. Another, and a stronger reason, was our determination never to become a party in any of the controversies around us, and even to avoid, as much as possible, being drawn into disputes with others about our own opinions and practice; and although the respectable quarter from which the "Observations" proceeded might seem to demand some notice, yet we did not think that either our credit, or our usefulness, would be increased by entering into a contest with a member of the managing committee. Besides, we were aware, that a committee of the House of Commons was about to sit upon the affairs of the Penitentiary, and that we should be individually subjected to examination upon all

the points to which the "Observations" relate*.

After recapitulating the conclusion of our Report, the "Observations" continue thus—

"Before I proceed to inquire how far these tables prove the prevalence of diarrhœa of any kind, I beg to ask, how they can show that the diarrhœa, for which the medicine alluded to is supposed to have been given, was of a peculiar nature, or had any resemblance to the present disease? Can the exhibition of the chalk mixture or powder prove that this disease was preceded or accompanied by pete-

* I have been under some embarrassment what method to adopt in replying to this document of Mr. Holford's. One method would have been, without printing the document at length, to state the objections which it contains, and then to give answers to them. But this I could not follow, in consequence of the objections not being put in distinct propositions. Another method would have been, still without printing the document itself, to extract what seemed to me to bear the force of objections, and to put them into distinct propositions in my own language. But this would have had too much the appearance of making out a case for myself to reply to, and might have exposed me to a suspicion of misrepresentation. It only remained, therefore, for me to take the "Observations," paragraph by paragraph, that the original might be at hand to determine whether I have interpreted each objection in its true sense, and have fairly answered them.

chial spots or blotches? that it had a dysenteric character? that it was attended with tenesmus? or with the inflation of the lower regions of the abdomen, or the very sudden and violent pains, which were observable in the present disorder? All these symptoms will be negatived by the medical man who gave the medicine; nor was the treatment of the two disorders the same; but we are called upon to infer the existence of a diarrhœa similar to the present one, merely from the supposed use of a medicine, by which the present disorder has not been cured, the physicians having, on the contrary, found themselves obliged to have recourse, for its cure, to the use of mercury, pushed in general to such an extent as to produce salivation."

I presume that the several interrogations which here follow each other in succession, are intended to have the force of so many distinct objections; imputing to us that we really did insist, in our Report, that the diarrhœa of former years was of a peculiar nature, and had a resemblance to the present disease; and that, extending our notion of such resemblance to the minutest particulars, we really did insist, in our Report, that the exhibition of chalk mixture or powder proved the diarrhœa of former years to have been preceded, or accompanied by, petechial spots or blotches; to have had a

dysenteric character, and been attended with tenesmus, and inflation and violent pain, like the present disorder.

Whoever will take the trouble of referring to the Report itself, will find, that the disorder formerly prevalent in the Penitentiary, is there spoken of in the most general terms, and that the name diarrhœa is used in the largest sense, and as synonymous with flux. He will find, moreover, that we strictly abstain from ascribing to it any particular symptoms or accompaniments, and that, in mentioning its peculiarities, we expressly state them to consist, not in its symptoms or accompaniments, but in its difficulty of cure, and liability to recur in the same individuals. Lastly, he will find that all the correspondence we pretend to have discovered between the disorder of the bowels which has recently, and that which has always, prevailed in the Penitentiary, is, that they were both "of the same general character." This was a flux, and that was a flux; and as such they were as like each other, as one fever is like another, or as diseases commonly are

which come under the same generic denomination. In fact, the symptoms brought forward to mark the essential difference of the two diseases, might or might not exist without changing their nature, or altering any opinion which might otherwise be formed concerning their origin. They apply to degrees of severity and malignancy, not to the essence of the disease.

It is implied by the argument (otherwise the argument fails altogether), that the signs enumerated were attendant upon the whole course of the late flux, and the petechiæ, the dysenteric character, tenesmus, inflation, and violent and sudden pains were present in every case. Now, the petechiæ, if by them are meant scorbutic spots upon the skin, were, indeed, very general, as long as they lasted, but they lasted only six weeks; and if by them are meant ecchymosed spots in the intestines, they could only be known to exist where they were found, namely, in several who died and were examined after death, although they might, and probably did exist in many others. With respect to

the tenesmus, and the blood (or whatever is meant by the dysenteric character), and violent pains, they did not occur in more than half the cases. So that, should these symptoms be held to constitute essential distinctions of disease (which is impossible), the late flux was not only different from the former diarrhœa, but was itself a different disease in one-half of the prisoners, from what it was in the other half.

The argument from the treatment of the two disorders not being the same, proceeds upon the supposition, that diseases of the same general character and denomination are always treated by one and the same remedy; and, further, that their being amenable or not to one and the same remedy, is the test, whether they are or are not entitled to such or such a character, and to such or such a name. The supposition is not unreasonable in itself, and very likely to occur to any unprofessional person. But physicians (I fear) must admit, that the present state of their knowledge will hardly enable them to arrive at an axiom which presumes

so precise an insight into the essence of diseases, and the operation of medicines. Although fevers, and influenzas, and erysipelas, require to be treated at different times by different, or even opposite methods, in the same place and in the same individuals, yet physicians still talk of fevers, and influenzas, and erysipelas, and still discern a certain conformity of character in each, whenever it occurs, by which they are entitled to the same names under all circumstances. Granting, therefore, that the bowel complaints of the Penitentiary were, during six years and a half, treated with chalk mixture, and subsequently were treated with mercury, we did not (I presume to think) greatly err, either in conceiving them always to have borne the same general character, or in calling them by the same generic name, *the chalk mixture and the mercury notwithstanding*.

Medical men will hardly pardon me for dwelling so long upon these observations; but I have been led to do so, from recollecting the impression they made upon those to whom they were originally addressed.

Mr. Holford next proceeds thus. "I deny, however, that the liability of the prisoners to diarrhoea of any kind can be estimated by the quantity of medicine administered for that disorder in the prison.

The first thing which it occurs to a prisoner in any prison to say, when he wishes to feign illness, is, that he has a pain in his bowels; and whenever such a complaint has been mentioned in the Penitentiary, the party has had the chalk mixture or powder, of course, without any previous investigation into the reality of the disease, as the surgeon will testify. Every prisoner, therefore, who has pretended to have a pain in his bowels as an excuse for not doing work enough, or from a wish to have a few days' enjoyment of better food, or of ease and idleness in the infirmary, or from a desire to miss chapel, or plague his turnkey to let him out of his cell to the privy in his ward oftener than was convenient, or from any other cause, even though he may have been discovered afterwards to have been shamming, is included in these tables as a case of diarrhoea, his name appearing on the surgeon's books among those who had taken chalk; and I believe the medical gentlemen who drew the Report may safely be appealed to as witnesses for this fact, *viz.*, that the class of cases of feigned illness is not a small one in the Penitentiary; and can speak from their own experience of the curious tricks and devices practised in support of imposture, and of the difficulty of detecting it; they can also probably remember instances, in which prisoners have purposely brought back their illness by drinking cold water and other expedients; and I can tell them, that when the prisoners were employed in flax-beating some time ago, several of them were detected in chewing the flax to pro-

duce a temporary derangement in their bowels, all of whom now stand, of course, in these tables as cases of genuine diarrhœa.”

The sum of the objection contained in this paragraph is, that diarrhœa was the disorder which the prisoners were accustomed to feign, for the sake of procuring indulgencies and avoiding labour; yet that all cases, real and feigned, are included in our tables.

We unquestionably did not pretend to distinguish between real and feigned cases, where all were treated alike. The fact of feigned disease could only have been ascertained at the time. If it was not ascertained at the time, it cannot now be assumed; and, if it was ascertained, it is rather extraordinary that the counterfeits should still have been treated as actual diseases, and indulgencies still granted as to real invalids, and fresh and fresh motives held out to counterfeits.

If there is any body who, from memory, can speak to the fact of a considerable number of these cases being counterfeits, it must be the apothecary. Now, the apothecary

was employed by us, day after day, in our investigation, and when it was completed, he was perfectly aware of the conclusion to which it led. He was ready and unreserved in his communications; yet I do not recollect, neither do any of my colleagues recollect, that he mentioned a single word about counterfeit cases, or made any objection whatever to our mode of proceeding, or stated any circumstance within his knowledge which could invalidate our conclusion. Our impression was, that Mr. Pratt regarded his own books as authentic records of medicines prescribed for real diseases. He brought these books to us unsolicited, and he produced them with this memorable observation, "How lucky it is I have kept them*"

But, when Mr. Holford concludes, that

* These words are in the recollection of all the physicians; for they were the subject of frequent, very frequent remark at the time, seeming (as we thought) to intimate the apothecary's own opinion, that his day-books contained something useful towards the object of our inquiry. Now, the object of our inquiry at the time, was some definite proof of the existence of diarrhœa in the prison prior to the autumn of 1822, a fact which we already more than suspected. (See page 220.)

cases feigned, for a great variety of motives, which he specifies, and cases purposely produced in a great variety of ways, all "stand in our tables as cases of genuine diarrhœa," he, to our surprise, quotes this very Mr. Pratt as the source of the information from which he proceeds to his conclusion; for he means no other person, when he says, "as the surgeon will testify." Yet, after all, what does he quote him as testifying? That prisoners, making certain complaints of illness, "had chalk mixture or chalk powder, *of course, without any previous investigation into the reality of their disease.*" Surely this is not an announcement on the part of Mr. Pratt of the truth, as it was actually ascertained by himself, that all the prisoners who so complained were "shamming," but an acknowledgment of his own omission to ascertain whether they were so or not.

I will venture to make this general observation, for the truth of which I appeal to all physicians of public institutions, namely, that when people have an interest in seeming to be ill, they always counterfeit dis-

orders of *sensation, and sensation merely*, and thus they often succeed, owing to the extreme difficulty of detecting the deceit. If a person affirms that he has pain, how can you be sure that he has not? But never was an instance known of feigned diarrhœa, because no one was ever silly enough to believe that the pretence could go undiscovered for a moment. Surely the prisoners of the Penitentiary are the last one should be inclined to suspect as the authors of a stratagem which would necessarily detect itself.

But let it be admitted, for an instant, that the prisoners of the Penitentiary did pretend a flux of the bowels for six years and a half in succession, yet is it not incredible, that any medical man could be so deceived as to go on prescribing, during six years and a half in succession, for any disease whatever, as if it had affected from one-half to one-tenth of a certain community; while, in point of fact, the disease had not existed at all during the whole of that period? And is it not still more incredible, that any medical man should so prescribe for a disease,

the characteristic symptom of which, if it had been real, must have continually forced itself upon his senses?

But let it be admitted, not only that flux of the bowels was the feigned disease of the Penitentiary, during six years and a half, but also, that feigned as it was, Mr. Pratt went on prescribing chalk mixture and chalk powder for it, as if it had been real during the whole of this period: what follows? A coincidence of the most extraordinary kind, namely, that this same disease which had been the *unreal* and *fictitious* disease of the Penitentiary during so many years, became all at once so unquestionably *real*, that the lives of half the prisoners were in jeopardy from it, and many actually died; and, moreover, that the very remedy which had been prescribed during so many years, *for no purpose whatever*, was the same which, at length, was found *most necessary and indispensable*.*

* *Vide* page 21, where it will be seen what remedies we found the medical officers prescribing, with apparent success, when we were first called to the Penitentiary.

Of the motives assigned by Mr. Holford for counterfeiting a disease, which never can be counterfeited with success, I have little to say. Of the minor motives, such as missing chapel, and plaguing the turnkey, I know nothing, and can say nothing. But concerning the principal motive, which includes every other that can be imagined, that of obtaining admission into the infirmary, where the prisoners enjoyed a better diet, idleness, ease, society, &c., I wish to make a few observations.

It appeared to me, when this subject was investigated last year, that those gentlemen (not professional) who dissented from the conclusion of the physicians, respecting the existence of flux within the Penitentiary since its foundation, did so upon the presumption, that all persons for whom the medicine, considered by us unequivocally to denote the disease, was prescribed, were, during the time of taking it, treated in every other respect as invalids; that they were released from their usual labours, and *brought into the infirmary*, and allowed all its indul-

gencies and comforts. Consequently, as there seemed to exist such strong motives for prisoners to pretend a trivial disease, they could not help believing that they did so. The fact, however, was not as it was presumed. Of those who took the chalk mixture and powder, some were received into the infirmary, and some were not; and the latter, upon the whole, were the majority. These had the medicine sent to them in their cells; they were allowed no indulgence, and no exemption from their ordinary labours, and could have no imaginable motive for pretending disease.

My friend Dr. Macmichael, who took a peculiar interest in this question, and to whose acuteness the discovery of a predominant disease always existing in the Penitentiary is principally to be ascribed, has furnished me with an important document, shewing how many of those who were treated for a flux of the bowels, were received into the infirmary in each year, and how many were not:—

	1816	1817	1818	1819	1820	1821	1822
Number of Prisoners - -	72	212	246	351	609	798	866
Number of those who were treated for a Flux of the Bowels - - -	23	104	106	82	85	87	88
Number of those so treated who were admitted into the Infirmary - -	14	4	36	37	60	73	54
Number of those so treated who were not admitted into the Infirmary -	9	100	70	45	25	14	34

It is remarkable that, as the disease became more limited in extent, the numbers admitted into the infirmary were proportionably greater; and that, in the three last years, the cases treated as flux in the infirmary, far exceeded those so treated in the prison. My belief is, that as the extent of the disease became less, its severity was greater, and that, from a smaller number of cases, there were more that required to be carefully treated. For, in the year 1822*,

* *Vide* page 211.

between January and the 2d of July, and before the less nutritive diet was adopted, five deaths are reported from diarrhœa, or dysentery; while, during the whole year, not more than eighty-eight suffered those diseases, as far as we can judge from the remedies employed; a mortality proportionably greater than that which subsequently occurred from diseases of the same character, when they constituted a part of the epidemic.

I had almost forgot to advert to the means which prisoners are said to have used for purposely procuring bowel complaints. Drinking cold water, and masticating flax, might, and probably did, reproduce diarrhœa in a few, who were hardly convalescent from recent attacks. But the question is not concerning what has happened lately. It is allowed by all, that a disorder of the bowels has lately prevailed, which was capable of being reproduced by any thing that had the least power of irritating. We are inquiring what could have produced a flux of the bowels *de novo* in a community otherwise

healthy several years ago, and continued to produce it for several years in succession. The means specified certainly could not. He who, being in perfect health, takes pure water for his purgative, or sucks out the little juice that lingers in a bit of dried flax, will surely not suffer such a commotion of the bowels, as will be mistaken for disease.

“ I come now to cases of sickness, neither feigned nor purposely produced. I believe that a great majority of the cases, for which medicine may have been properly given in the Penitentiary, would never have been brought under the observation of a physician or apothecary, if they had occurred out of the prison, or have been known to any but the parties affected, who would (to use a common phrase) have allowed the disorder to carry itself off, or perhaps have varied their food. If a medical man were to go round certain streets inhabited by poor families in a part of the town esteemed the most healthy, prepared to dole out his medicine to any individual who chose to apply for it, and this for nothing; and if he were besides to enter upon a regular examination of every inhabitant in those streets once a month as to the state of his health, I suspect he would find at the end of the year, that he had expended more medicine than had been sold in any other district of the same size from the apothecaries' shops in the neighbourhood; but he certainly would not be warranted in drawing any unfavourable comparison between the

streets under his care and the neighbouring districts. Now the wards of the Penitentiary are just like these streets."

Here the matter of fact, as it regards the Penitentiary, that the cases of real disease within it were such, for the most part, as required no medical treatment, and the matter of fact, as it regards certain districts of the town, that the inhabitants have a natural love of physic, are both mere assumptions.

It will not, therefore, be thought disrespectful if I decline answering them, since they can have naturally no weight in determining the matter in question. I will only take the liberty of observing, concerning the latter assumption in this paragraph, that the parallel which is imagined should have been carried further; for, as it stands, it would not, if true, lead to the inference which is intended. It is not enough for the argument, that people in certain districts should have an inherent longing for physic *generally*, and pretend *any disease*, for the sake of obtaining it, they must have an express

longing for chalk mixture, and the disease which they pretend must be diarrhœa.

“ Disorders of the bowels are, I am told, not uncommonly found in prisons, or among any large bodies of men who are all fed alike, and have not the opportunity of varying their food, until there shall be an actual appearance of some derangement of the system; and it is not improbable that diarrhœa may have been prevalent in a prison where very coarse brown bread has been the basis of the dietary; but I deny that this fact can be inferred in opposition to other evidence, from the mere examination of the quantity of medicine sent into the prison, even if the surgeon had stood by to see it taken, which he undoubtedly was not in the habit of doing.”

When Dr. Roget and myself were first employed at the General Penitentiary, questions were drawn up by us, and addressed by the Secretary of State to various gaols in England, respecting their schemes of diet, and their ordinary diseases; and, from the answers returned, it did not appear, that bowel complaints, of the same general character with that of the Penitentiary, had been prevalent in any of them. Thus much I think it proper to state, as a matter of fact.

Further I am not concerned to reply to what is admitted to be hearsay.

“ If it be true, that the number of cases in which the chalk mixture has been given, has been gradually diminishing during the period of six years and a half, alluded to in the physician’s Report, so that comprehending one-third of the whole number of the prisoners in the first half year ending on the 31st of December, 1816, they amounted only to one-ninth or one-tenth of the number in the prison during the whole of the year 1822 (as is stated in the Tables in the Report), I certainly cannot infer from that fact, any change in the climate of the Penitentiary, or any gradual improvement in the local circumstances connected with the prison, but should rather look for the causes of the decrease in the number of patients or quantity of medicine, to the surgeon’s having discovered that he had been too lavish of his physic, or to his having become more skilful in detecting the attempts of prisoners to impose upon him, or to the greater care taken by himself or the officers to see the medicines taken, or to such changes in the diet or discipline of the infirmary, as may have diminished the desire of the prisoners to be removed thither,” &c. &c. &c.

This mode of arguing, that the diminution in the cases of diarrhœa, year after year, was not real, but in consequence of the apothecary and officers having become more skilful in detecting the tricks of the prisoners, proceeds upon an implied assump-

tion of the whole question at issue. It is first taken for granted, that a flux never existed in the prison, and then a theory is set up to explain some deceptive circumstances which have led "credulous" people into erroneous notions upon this subject.

"There are, moreover, other classes of persons residing within the prison, who seem to have been strangely overlooked upon this occasion. We have a considerable number of inferior officers, male and female, within the walls of the Penitentiary, and it is well known, that bowel complaints have not been prevalent among them before the month of April last, when the disorder was evidently infectious, and several of the officers employed among the prisoners were attacked by it. We have also had, from the first establishment of the prison, families of superior officers residing in the very centre of the building, which have been so healthy, that no individual belonging to any of them has died since the prison was opened."

Here is the induction of a particular fact with nothing raised upon it; and it would be hardly fair for me to presume what was the inference intended, and thus to make an argument for myself to reply to. Surely the health of the resident officers cannot be intended either to negative the fact that the

prisoners were ill, or to intimate that, of two classes of people, differing from each other in all the circumstances of their lives, although living in the same place, one could not possibly derive disease from a source to which the other might be exposed with impunity.

“ To come now to the Tables exhibiting the number of patients affected by diarrhoea in each year, and of those in whom that disease is traced to successive years. Assuming, for the sake of argument, that every dose of medicine was given for a real disorder, I must still doubt, how far the principles upon which these Tables, though drawn up with great labour, have been constructed, are correct, for the purpose of showing the prevalence of diarrhoea. The first defect in them appears to me to be, that they make no distinction between cases, in which the bowels of the patient have been relaxed for a single day, and cases which have been obstinate and protracted.”

We did not make the distinction here required, because it was not warrantable from the data before us.

“ If the greater number of convicts within the prison should appear to have had a looseness for one day in the course of the year, I think it can hardly be stated, from any number of such cases, that diarrhoea has been a prevalent disorder in the Penitentiary; nor if many prisoners

have had relaxed bowels once in the course of each year, for several successive years, can such persons be considered as having had a disorder "difficult of cure," such repeated instances of relaxed bowels in a succession of years being nothing more than is experienced by a large proportion of the inhabitants of this country. Now there is in these Tables no distinction between the cases of patients, to whom one single delivery of medicine has taken place, and of those who may have been under a long continuance of medicine, either in the same year, or in successive years. I have been furnished by Mr. Pratt, from whose papers these Tables have been formed, with a list of the prisoners who have taken the medicine alluded to, from the first opening of the prison, and with the daily quantity of medicine delivered out to each. I cannot make the numbers amount to those mentioned in the Report; but there are a great many cases, in which one single delivery of "a mixture," or of "chalk powder," appears to have taken place during the whole period of the prisoners' confinement. There are also a great many cases of prisoners who appear to have had medicine delivered to them on two days only in the course of two or more successive years; and there is one case of a woman who had medicine only on the 31st of December in one year, and on the 1st of January only in the next, who, I learn from Mr. Pratt. stands in these Tables as a patient for diarrhœa in the two successive years."

From "a looseness for one day in the course of the year," appertaining to any number of prisoners, unquestionably it could not

be inferred that diarrhœa had been the prevalent disorder of the Penitentiary; and from many instances of "relaxed bowels once in the course of each year for several successive years," unquestionably it could not be inferred that the disorder had been difficult of cure. But how were these facts concerning "looseness for one day in the course of the year," and "relaxed bowels once in the course of each year, for several successive years," to be ascertained?

Mr. Holford, relying on certain lists which were furnished him, seems to intimate (if I rightly understand him), that these facts might have been ascertained from the quantities of medicine therein stated to have been supplied to different prisoners; and that a single delivery of medicine might be considered to indicate a diarrhœa of a single day, and the gross number of single deliveries to stand for the gross number of diarrhœas of one day in each year, for several successive years.

But this calculation and its results are

contrary to my constant observation, which assures me that nine people out of ten, in every condition of life, and especially among the poor, would rather run their chance with a common diarrhœa, than take medicine for its relief; and that nine people out of ten never do apply for medicine until it is gone beyond (what they conceive to be) a common diarrhœa. By no other rule can I pretend to judge concerning the disorder of the Penitentiary, and the medicines prescribed for it, than that of my own experience; and thus so far am I from believing a single delivery of chalk mixture or chalk powder to have been always given for a single day's diarrhœa, that I conceive nine prisoners out of ten never took even a single dose, until the disorder had already been troublesome to them during several days.

But the question is not concerning a *dose* of the medicine, but concerning a *delivery*. I do not know what quantity of the chalk powder went to one *delivery*; but one *delivery* of chalk mixture amounted to eight ounces, or five full doses. To half an ounce

of tincture of calumba, and twenty-five drops of laudanum, and two drachms of aromatic confection, was added as much chalk mixture as would complete the eight ounces.

Now, from what obtains in ordinary practice, and especially in the practice of public institutions, I should infer that the prisoners for whom this mixture of eight ounces was prescribed, had, in the opinion of the prescriber, something more than a common diarrhœa, or a diarrhœa of a single day. Since for such a disorder, in a person otherwise healthy, one dose, and one dose only, would be thought enough, and repeated doses, to the number of five, would be deemed inexpedient, and not without the hazard of some inconvenience.

Upon the whole, then, I must continue to believe, that the physicians acted a prudent part in not admitting any distinctions of the kind intimated into their Report; and that, although they were quite aware of numerous cases, for which the medicines were pre-

scribed more and less frequently, and might suspect that such cases were more and less severe, they were still right in inferring no more than the general prevalence of a certain disorder, from the general use of certain remedies. Thus much they thought they could do with safety. But, it is said, that they cannot do even this; while, at the same time, it is complained, that they have not done more, namely, that they have not made a distinction of cases, grounded upon the greater and less frequency with which the medicines were prescribed.

There is one circumstance especially pointed out by Mr. Holford in disparagement of the method of proceeding adopted by the physicians, upon which I must make a short remark. It is, that “a woman, who had medicine only on the 31st of December in one year, and on the 1st of January only in the next, stands in these Tables as a patient for diarrhœa in two successive years.”

Now, it was the purpose of the physicians to show, by their Tables, the extent of the disease at different periods of time since the

foundation of the Penitentiary; and it was natural, with this view, to fix upon the division of years. Thus they reckoned all who were treated for a flux of the bowels in each year, taking care not to count the same individuals more than once, how frequently soever any might have been under treatment between January and December; for they considered that the disease had not extended its sphere within a certain period, so long as the same individuals were attacked by it. Moreover, it was the purpose of the physicians to show, by their Tables, how far the disease was maintained in the Penitentiary by new cases, arising at different periods, and how far by the same cases continued from one period to another; and with this view, also, it was natural to fix upon the division of years. Thus, beginning each year as a fresh period, they reckoned in the same manner as before, all who took chalk mixture or powder in the course of it, including, however, both those who had, and those who had not, been enumerated in any former year; yet finally distinguishing them, and specifying the numbers capable of being traced back from one year to another. Hence

an individual case, being upon the confines of two periods would be reckoned twice; while occurring at both extremes of the same period, and many times in the course of it, it would be reckoned only once; and thus it happened, that the case of the female who was treated for flux on the 31st of December in one year, and on the 1st of January in the next, was included in two periods.

I have entered upon this explanation, because the instance, so expressly pointed out, seemed to impute a sort of stratagem to the Physicians in their mode of reckoning; nevertheless, I am much surprised that it was not at once seen how this single fault, (if it be a fault) unavoidably arose from the structure of the Tables. And indeed, all such tables must, from their very nature, be obnoxious to faults of the same kind in single instances. For no form of generalizing was ever known, which could give a satisfactory view of a subject upon the whole, and at the same time do exact justice to every particular included in it.

The words "difficult of cure," are quoted from the Report of the Physicians, as falsely characterizing a disease, which in many instances seemed to require little medical treatment. Nevertheless, however mild it might have been in particular instances, yet, since it was the predominant disease of the place during many years, and since the patients of one year were traced back, in the proportion of a third, a fourth, or a fifth, as the patients of preceding years, and since it, or a disease of the same general character, finally involved all at once, both those who had, and those who had not suffered it before, namely, almost the whole population of the prison, I do not think the physicians were far wrong in stating *summarily* that it was "difficult of cure."

"From these Tables, moreover, if framed with a view to the discovery of the extent in which diarrhoea can have been produced by any local influence in the prison, should be excluded all cases in which the looseness of the bowels has arisen in the latter stage of other disorders, from the debility occasioned by consumption, &c. &c. and cases, where the patients are known to have had the digestive organs materially injured by drinking, or other vicious

courses, before they came into confinement, &c. When all these shall be withdrawn, the numbers will, I suspect, be very materially diminished; at all events, so long as they stand on the file undistinguished, the Tables cannot be considered as containing the result of an investigation into the effects of local influence, even admitting, what I believe no person will be credulous enough to believe, that all the cases, for which medicine has been given, have been cases of real sickness for which physic would be taken in ordinary life."

When the Tables were drawn up by the physicians, they had the constant assistance of the apothecary, and some cases were excluded for reasons which he suggested, and which were deemed satisfactory at the time. I can therefore hardly conceive it possible that many cases are still to be found in them, which ought not to have been admitted.

Mr. Holford has added a postscript to the "Observations," which I proceed to notice with great reluctance. Most willingly should it pass without a single remark from me, but that my total silence might seem to admit the censure as just, which it is its express object to cast upon my colleagues and myself.

I say its express object, because the writer in the mean time loses sight of every other, and even so entirely forgets the conclusion, which he has hitherto been labouring to establish, as to bring forward facts in support of his censure, which furnish stronger grounds for the opinion of the physicians than those which were adduced by the physicians themselves.

The Postscript is as follows—

“ Since the foregoing Observations were written, I have looked more narrowly than I had done before into part of the papers given to me by Mr. Pratt, which he assures me are faithful extracts from his books of all the entries respecting the delivery of chalk mixture, or chalk powder, since the opening of the Penitentiary (these entries being the ground of the Physicians’ Report;) and if these extracts have any pretensions to correctness, the Tables of the Physicians must be abandoned as entirely useless with reference to the matter in question, or indeed as to any matter. I have taken up that portion of the Tables which professes to give the whole number of the patients who took chalk in 1822, and the numbers traced back as having taken it in former years, and have examined these numbers with the entries in Mr. Pratt’s books as vouched and explained by the extracts given to me. I chose the

last year in the Tables (1822), because I thought the year in which the prison began to be affected with the prevailing epidemic, was that from which, if any similar disorder could be traced back to former years, it was most important to trace it, and I have no reason to suppose, that the Tables are more or less accurate in respect to the patients of that year than they are concerning those of any other year.

The Tables make the whole number of patients for diarrhoea in that year 88; I make them 90; but I find that more than the half of that number, are cases in which medicine has been delivered out only once. The physicians make the number traced back 17; I make them 24; but in a very large proportion of these, the patient has only had the medicine once given to him in most of the years into which he is traced. If the physicians mean, that the number given comprises all who had taken chalk in the preceding years, they have omitted several; but if they mean, that there are 17 cases in which persons who were afflicted with diarrhoea in 1822, had been under the influence of chalk medicine in preceding years for any considerable length of time, that is certainly not the case according to these papers."

First, for the justice of the censure. The apothecary furnishes Mr. Holford with certain papers assuring him, that they are faithful extracts from the day-books of all entries respecting chalk mixture and chalk powder; and Mr. Holford, comparing

the numbers given in our tables for one year, 1822, with the entries of the day-books as vouched and explained by these extracts made by the apothecary, finds they do not entirely accord; hereupon he lays the foundation of his somewhat sweeping censure, and adds, "if these extracts have any pretensions to correctness," (putting the case hypothetically, but arguing upon it as a fact,) "the tables of the physicians must be abandoned as entirely useless with reference to the matter in question, or *indeed as to any matter.*"

The few last words contain something more of contempt than the physicians (I am persuaded) will be thought to deserve, certainly something more, than any reasons which are apparent will be thought to justify.

Several times in the course of the "Observations" has Mr. Holford raised his arguments upon the sole authority of statements furnished him by Mr. Pratt; and in so doing, when those statements related to professional points, upon which Mr. Pratt had pe-

culiar means of information, he did what was right; but in so doing, when those statements related to points which were capable of being ascertained, and verified by himself, he did, what perhaps is hardly allowable in any inquiry like the present. But, however this may be, when he finally takes upon himself to dismiss the physicians with a sentence of very strong censure and contempt, I may be pardoned for thinking, that then especially he ought to have verified for himself the facts which are the grounds of his harsh opinion, or that at least he should not have allowed it to appear, that he had taken them altogether upon the credit of another. The facts were entirely within his own reach, and Mr. Holford could, and (I presume to repeat) ought to have examined for himself the original entries in the day-books, and compared them with the tables of the physicians, before he ventured to hold up their labors to the contempt of the Managing Committee, and characterized them "as entirely useless with reference to the matter in question, or *indeed as to any matter.*"

Nevertheless the physicians are, upon the whole, under some obligation to Mr. Holford for adding strength to their conclusion by the very facts, which he has chosen to accept from Mr. Pratt in support of his censure. For grant that, in respect to the gross number of cases in the year 1822, and the number of cases traced back from that year to preceding years, we are wrong, and that he is right. We are wrong in understating that which he is right in putting at a higher amount. We make the number of cases in the year, 88; he makes them 90. We make the cases traced back 17; he makes them 24. Whence it will follow arithmetically, that he goes so much further than ourselves in imputing disease to the Penitentiary, as 90 are more than 88, and 24 are more than 17.

But after all it must be admitted that extracts of entries from journals of the kind in question are very liable to error. The question is to which side in the present instance he error most probably belongs,

whether to that of the physicians or of the apothecary. If several persons should be employed *separately* upon a journal, containing entries of various kinds extended over many years, in extracting from it those which related to a particular subject, it is probable that the numbers as calculated by each would be different, and that in every instance the numbers would be incorrect. But, if several persons should be employed *together* upon such a journal, for the same purpose, and so distribute their labours, that each should be a check upon the other, it is probable that the numbers, thus calculated by all, would be correct. In a long catalogue a single entry is very apt to escape the eye, and to go unreckoned.

Feeling this liability to error, the physicians and Mr. Pratt were *conjointly* occupied upon the day-books in question, which contained prescriptions of various kinds, for various complaints, during a period of six years and a half, for the purpose of extracting from them the entries of chalk mixture and chalk powder. And it is no disparagement of the

accuracy of any of us, to believe that the numbers thus calculated by us altogether bear a greater probability of truth, than any numbers which each might have calculated singly. Is it too much to suppose that they are really more accurate than those so calculated by Mr. Pratt?

Subjoined to the Postscript are Two tables, upon which I desire to make a few observations. The first is entitled

ABSTRACT OF THE NUMBER OF PRISONERS

To whom any Delivery of Chalk Mixture, or Chalk Powders, has taken place in the Penitentiary, during the latter part of the year 1816, and during the years 1817, 1818, 1819, 1820, 1821, and 1822; distinguishing the Number of Deliveries to any one Prisoner during each year.

<i>Number of deliveries.</i>	1816	1817	1818	1819	1820	1821	1822
One - -	9	40	49	53	62	71	72
Two - -	7	16	13	19	18	28	21
Three - -		7	4	7	4	7	6
Four - -	3	2	3	4	2	8	3
Five - -			2	4	3	1	1
Six - -			1	1		2	
More than six	2	3	5	4		5	10
Total	21	68	77	92	89	122	113
Average number of prisoners in the Penitentiary - -	64	151	224	273	427	631	745

The purpose of this Table is to show that of those, for whom chalk mixture or chalk powder was prescribed in each year, the majority took so much only as was contained in one delivery. But it has been already proved, that this fact, being admitted, does not go to negative the existence of diarrhœa as the predominant disorder of the prison*.

The following Table, which is the second subjoined to the postscript of the "Observations," I have already taken the liberty of using in another place †, because it seemed to me to contain, in the most succinct shape, as strong an argument as could be imagined of a predominant disease existing in the Penitentiary, and of that disease being diarrhœa. In speaking of the day-books, I observed that the form of certain entries in them went especially to prove the fact, those namely, of chalk mixture, sent wholesale to prisoners working in companies, without any specification of the individuals who were to take it. But I had mislaid my note of the num-

* *Vide* page 265. † *Vide* page 230.

ber of such entries, and had I not accidentally turned to Mr. Holford's "Observations," and found this Table subjoined to them, I should have been at a loss how to put the argument in its most convincing form. I have yet another use to make of the same Table, and therefore I now give it again in its proper place.

In 1816, an entry of	1	quart bottle of mixture for	the kitchen women,
— ditto	1	ditto	Mrs. Clarke's women.
In 1817, ditto	2	ditto	Mrs. Clarke's women.
— ditto	1	ditto	Mrs. Evans's women.
— ditto	2	ditto	the laundry.
— ditto	1	ditto	the carpenter's cell.
In 1818, ditto	1	ditto	Mrs. Croome's women.
— ditto	1	ditto	Mrs. Gould's women.
— ditto	1	ditto	Laban's men.
— ditto	3	ditto	Brett's men.
In 1819, ditto	1	ditto	Mrs. Clarke's women.

Is not noticed in the above Table.

It is here well worthy of remark, that Mr. Holford himself, who, in one part of his "Observations," insists so strongly upon the motives for "shamming" being a sufficient proof of the fact, does in this very table give the most glaring prominence to a circumstance which destroys the supposition alto-

gether. For, by it we find the complaint, for which chalk mixture was prescribed, was so far from furnishing a claim of indulgence, that not merely those who were employed at their trades, but those who sustained the hard labour and household drudgery of the prison, were not exempt from that labour and drudgery in consequence of taking medicine.

Thus much I have thought it my duty to say in reply to the "Observations" of Mr. Holford. They were considered (I know) by those to whom they were addressed, to be a complete refutation of all which the physicians had advanced concerning flux, as the predominant disorder of the Penitentiary since its foundation. The physicians themselves, however, presumed to think otherwise, and even to believe that much was contained in the "Observations," which tended rather to confirm their own opinions. The question is an important one, and it is now left for the decision of medical men.

In closing my review of the "Observations," I shall refrain from passing, in my turn, any summary opinion upon them. For

I feel much too strongly what is due to a man, who, during many years, and under circumstances of peculiar difficulty, has bestowed his best exertions, zealously and profitably, upon the great objects of the Penitentiary, to characterize any part of his labours as “entirely useless with reference to the matter in question, *or indeed as to any matter.*”

APPENDIX.

RESPECTING diarrhœa as the prevalent disorder of the prison since its foundation, I have one more remark to make, which, having omitted in its proper place, I think of sufficient importance to subjoin in an Appendix.

The Tables of the Physicians are (I must own) imperfect in one respect, and the day-books are not now within my reach to enable me to supply the defect. They give the proportion which those ill of diarrhœa in every year bore to the whole convict population of the Prison, both sick and well; whereas they ought to have given the proportion of those ill of diarrhœa to those ill of other complaints, or rather,

to have given this last proportion in addition to the former.

The Tables, indeed, as they stand, show enough: nevertheless, parallel statements are of great use in such cases; and, if the Physicians had admitted into their Tables, first the total number of prisoners, then the number of all who were ill, whatever was their complaint, and lastly the number of those ill of diarrhœa, they might have obtained, with respect to the two last, a parallel statement from any Hospital or Dispensary, which would have shown at once, whether the proportion of diarrhœa to other disorders in the Penitentiary was greater or less than elsewhere.

The following Tables are formed from Dr. Bateman's Book "on the Diseases of London," in which an account is given of the kind of Diseases and the number of Cases treated at the Public Dispensary, Carey Street, during twelve years. They show the proportion which the disorders, whose prominent symptom is flux of the bowels, including dysentery, diarrhœa, and cholera, bore to all others whatever in each year, during the whole of that period, and enable us to form a comparison between the Penitentiary, and one particular District

of London, in respect to the prevalence of those disorders.

YEAR . . .	1805	1806	1807	1808	1809	1810
Gross Number of Cases }	1821	2049	2063	1998	1957	2118
Cases of Flux .	91	87	134	112	95	119
YEAR . . .	1811	1812	1813	1814	1815	1816
Gross Number of Cases }	2224	2305	2504	2656	2610	2462
Cases of Flux .	140	123	144	109	121	130

It appears that, during the twelve years, the cases of flux, in the proportion they bore to the gross number of cases treated at the Public Dispensary, varied between a fifteenth and a twenty-fourth.

Now, if at the Penitentiary the proportion of those ill of diarrhœa to the whole of the prisoners both sick and well, was so considerable as one tenth in the last and most favourable year which our Tables embrace, and so enormous as one half in the first year, what must it have been to those only who were sick ?

But, if all the prisoners in the Penitentiary had been sick, the proportion of those suffering diarrhœa in the most favourable year, far exceeds that which is found in any Hospital or Dispensary, where I have made inquiry.

ERRATA.

Page 66, for Hydrager, read Hydrargyr.

Page 156, for cacompanied, read accompanied.

Page 218, for Columba, read Calumba.

LONDON:
PRINTED BY W. CLOWES,
Northumberland-court.







